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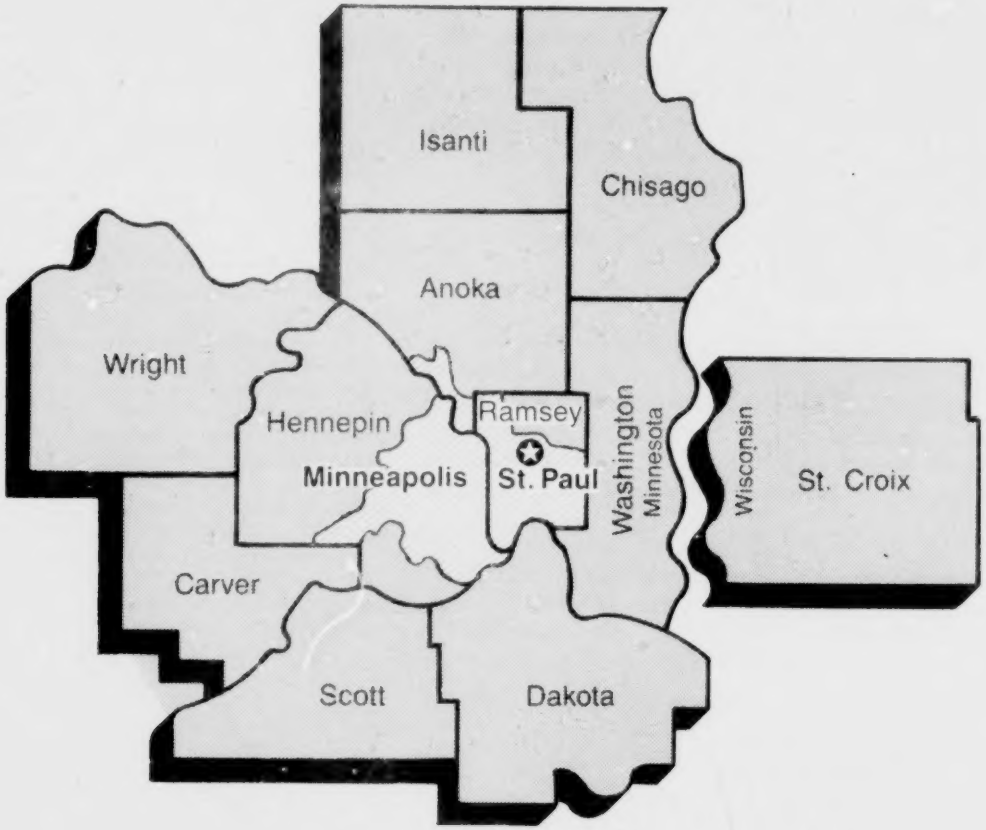
Area Wage Survey

Minneapolis–St. Paul, Minnesota–Wisconsin, Metropolitan Area, February 1989

U.S. Department of Labor
Bureau of Labor Statistics

Bulletin 3050-5



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Preface

This bulletin provides results of a February 1989 survey of occupational earnings in the Minneapolis-St. Paul, MN-WI, Metropolitan Statistical Area. The survey was made as part of the Bureau of Labor Statistics' area wage survey program. It was conducted by the Bureau's regional office in Chicago, IL, under the general direction of Ronald H. Pritzlaff, Assistant Regional Commissioner for Operations. The Bureau wishes to express its appreciation for the cooperation of the many firms that provided the data on which this bulletin is based.

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Note:

A report on occupational earnings and employee benefits in the Minneapolis-St. Paul area is available for the temporary help supply industry (September 1987). This report is available from the Bureau's regional offices. Regional offices also have available five summary releases: *Occupational Earnings and Wage Trends in Metropolitan Areas* (3 parts); *Occupational Earnings in All Metropolitan Areas* (combined); and *Wage Differences Among Metropolitan Areas.*

A summary bulletin, *Area Wage Surveys, Selected Metropolitan Areas,* provides data for all areas surveyed under this program during the year. It can be purchased from the Superintendent of Documents or from the BLS Publications Sales Center in Chicago.

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Minneapolis–St. Paul, Minnesota–Wisconsin, Metropolitan Area, February 1989

U.S. Department of Labor
Elizabeth Dole, Secretary

Bureau of Labor Statistics
Janet L. Norwood, Commissioner
April 1989

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Introduction

The Bureau of Labor Statistics is restructuring its area wage survey program to reflect changes in the number and geographic boundaries of the Nation's metropolitan statistical areas. In place of annual studies of 70 areas, the new program, when fully implemented in 1990, will cover 32 areas on an annual basis and two groups of 29 areas in alternate years.

This is 1 of the 32 areas being surveyed each year. While occupational earnings are presented annually (A-series tables), information on establishment practices and employee benefits (B-series tables) is presented every fourth year, when Bureau field representatives obtain such data during personal visits to respondents. This report has no B-series tables.

A major consideration in the area wage survey program is the need to describe the level and movement of wages in a variety of labor markets, through the analysis of (1) the level and distribution of wages by occupation, and (2) the movement of wages by occupational category and skill level. The program develops information that may be used for many purposes, including wage and salary administration, collective bargaining, and assistance in determining plant location. Survey results also are used by the U.S. Department of Labor to make wage determinations under the Service Contract Act of 1965.

Earnings

Tables A-1 through A-6 provide estimates of straight-time weekly or hourly earnings for workers in occupations common to a variety of manufacturing and nonmanufacturing industries. Where possible, occupations with related duties (e.g., accounting clerks and payroll clerks) are clustered to facilitate comparison. The occupations are defined in appendix B. For 31 large survey areas, tables A-12 through A-17 provide similar data for establishments employing 500 workers or more.

Table A-7 provides indexes and percent changes in average hourly earnings for office clerical workers, electronic data processing workers, industrial nurses, skilled maintenance trades workers, and unskilled plant workers. Where possible, data are presented for all industries and for manufacturing and nonmanufacturing separately. Data are not presented for skilled maintenance workers in nonmanufacturing because the number of workers employed in this occupational group in nonmanufacturing is too small to warrant separate presentation. This table provides a measure of wage trends after elimination of changes in average earnings caused by employment shifts among establishments as well as turnover of establishments included in survey samples. For further details, see appendix A.

Tables A-8 through A-11 provide measures of pay relationships in establishments. These measures may differ considerably from the pay relationships of overall area averages published in tables A-1 through A-6. See appendix A for details.

Appendixes

Appendix A describes the methods and concepts used in the area wage survey program and provides information on the scope of the survey.

Appendix B provides job descriptions used by Bureau field representatives to classify workers by occupation.

Table A-1. Weekly earnings of office workers in Minneapolis-St. Paul, MN-WI, February 1989

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[3]	Median[3]	Middle range[3]	175 and under 200	200 – 225	225 – 250	250 – 275	275 – 300	300 – 325	325 – 350	350 – 375	375 – 400	400 – 425	425 – 450	450 – 475	475 – 500	500 – 525	525 – 550	550 – 575	575 – 600	600 – 650	650 – 700	700 – 750	750 and over
Secretarial and keyboarding occupations																										
Secretaries	6,491	39.5	398.50	386.50	346.00– 441.50	–	–	–	45	264	525	948	1016	830	784	704	485	314	239	147	78	26	46	28	5	7
Manufacturing	3,616	40.0	400.00	390.00	347.50– 440.00	–	–	–	14	110	321	506	487	525	484	369	249	202	151	123	43	7	17	8	–	–
Nonmanufacturing	2,875	39.0	396.00	380.00	345.00– 441.50	–	–	–	31	154	204	442	529	305	300	335	236	112	88	24	35	19	29	20	5	7
Secretaries I	484	39.5	320.50	318.50	300.00– 339.50	–	–	–	14	102	175	124	49	18	1	1	–	–	–	–	–	–	–	–	–	–
Secretaries II	1,674	38.5	357.00	353.00	330.00– 381.00	–	–	–	30	97	189	491	383	208	146	101	22	1	–	1	5	–	–	–	–	–
Manufacturing	671	39.5	360.00	354.50	333.00– 385.00	–	–	–	1	25	103	178	147	103	67	29	16	1	–	1	–	–	–	–	–	–
Nonmanufacturing	1,003	38.0	355.00	351.00	327.50– 379.00	–	–	–	29	72	86	313	236	105	79	72	6	–	–	–	5	–	–	–	–	–
Secretaries III	2,242	39.5	391.50	384.50	355.00– 428.00	–	–	–	1	35	131	296	464	406	327	228	245	66	37	3	1	2	–	–	–	–
Manufacturing	1,056	40.0	382.50	378.50	354.00– 407.00	–	–	–	–	10	45	176	250	255	171	65	41	35	8	–	–	–	–	–	–	–
Nonmanufacturing	1,186	39.5	400.00	399.00	355.00– 444.00	–	–	–	1	25	86	120	214	151	156	163	204	31	29	3	1	2	–	–	–	–
Secretaries IV	1,445	40.0	434.00	428.00	394.00– 461.50	–	–	–	–	30	30	36	117	189	288	310	137	115	76	37	29	14	20	17	–	–
Manufacturing	890	40.0	428.50	424.00	400.00– 450.00	–	–	–	–	–	–	29	43	145	232	217	117	43	26	20	9	4	1	4	–	–
Nonmanufacturing	555	39.5	443.00	441.50	373.00– 494.50	–	–	–	–	30	30	7	74	44	56	93	20	72	50	17	20	10	19	13	–	–
Transportation and utilities	69	40.0	516.50	509.00	489.00– 528.50	–	–	–	–	–	–	–	–	–	3	3	4	16	25	6	3	2	3	4	–	–
Secretaries V	642	40.0	507.00	503.50	470.00– 531.00	–	–	–	–	–	–	–	3	9	22	63	80	132	126	106	42	10	26	11	5	7
Nonmanufacturing	92	40.0	549.50	544.50	454.00– 622.00	–	–	–	–	–	–	–	3	3	9	6	5	9	9	4	8	7	10	7	5	7
Transportation and utilities	26	40.0	587.50	585.00	557.50– 630.00	–	–	–	–	–	–	–	–	–	–	–	1	1	2	1	7	3	7	3	1	–
Stenographers	81	40.0	401.50	378.50	338.00– 455.00	–	–	–	–	1	4	34	–	6	–	4	18	1	6	7	–	–	–	–	–	–
Nonmanufacturing	51	40.0	440.00	455.00	378.50– 501.00	–	–	–	–	–	1	9	–	5	–	4	18	1	6	7	–	–	–	–	–	–
Transportation and utilities	48	40.0	447.00	455.00	404.00– 506.00	–	–	–	–	–	–	7	–	5	–	4	18	1	6	7	–	–	–	–	–	–
Stenographers I	52	40.0	421.00	455.00	342.00– 455.00	–	–	–	–	1	4	10	–	5	–	4	18	1	6	3	–	–	–	–	–	–
Nonmanufacturing																										
Transportation and utilities	44	40.0	438.50	455.00	395.50– 455.00	–	–	–	–	–	–	7	–	5	–	4	18	1	6	3	–	–	–	–	–	–
Typists	422	39.0	284.50	281.50	248.00– 307.50	2	48	61	61	114	83	21	11	1	–	19	–	–	1	–	–	–	–	–	–	–
Nonmanufacturing	311	38.5	283.00	279.00	243.50– 300.00	2	48	45	54	84	28	20	10	–	–	19	–	–	1	–	–	–	–	–	–	–
Transportation and utilities	47	40.0	338.50	281.00	262.50– 434.50	–	–	–	2	5	–	–	–	–	–	19	–	–	1	–	–	–	–	–	–	–
Typists I	223	38.5	257.50	254.00	241.50– 279.00	2	48	49	61	44	7	11	–	1	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	202	38.5	255.50	251.00	231.00– 279.00	2	48	45	54	38	4	11	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Typists II	199	39.0	314.00	305.00	282.00– 321.50	–	–	12	–	70	76	10	11	–	–	19	–	–	1	–	–	–	–	–	–	–
Word processors	906	39.0	342.00	338.50	290.00– 373.00	–	7	37	92	117	101	190	139	65	36	66	25	3	28	–	–	–	–	–	–	–
Manufacturing	203	39.5	344.50	340.00	288.00– 387.50	–	–	1	34	31	20	32	23	18	16	14	11	3	–	–	–	–	–	–	–	–
Nonmanufacturing	703	39.0	341.50	337.00	293.00– 365.00	–	7	36	58	86	81	158	116	47	20	52	14	–	28	–	–	–	–	–	–	–
Transportation and utilities	26	40.0	353.00	345.50	345.50– 345.50	–	–	–	2	2	2	15	–	1	–	2	–	–	2	–	–	–	–	–	–	–
Word processors I	302	39.0	298.00	287.00	270.00– 345.50	–	7	37	90	57	23	45	33	5	1	3	1	–	–	–	–	–	–	–	–	–
Manufacturing	90	39.5	299.00	288.00	273.00– 308.00	–	–	1	34	29	10	4	5	4	1	1	1	–	–	–	–	–	–	–	–	–
Nonmanufacturing	212	39.0	297.50	283.00	267.00– 349.50	–	7	36	56	28	13	41	28	1	–	2	–	–	–	–	–	–	–	–	–	–
Word processors II	604	39.5	364.50	352.50	326.50– 401.00	–	–	–	2	60	78	145	106	60	35	63	24	3	28	–	–	–	–	–	–	–
Manufacturing	113	39.5	380.50	368.50	340.00– 420.50	–	–	–	–	2	10	28	18	14	15	13	10	3	–	–	–	–	–	–	–	–
Nonmanufacturing	491	39.5	360.50	351.00	320.00– 390.00	–	–	–	2	58	68	117	88	46	20	50	14	–	28	–	–	–	–	–	–	–

See footnotes at end of tables.

Table A-1. Weekly earnings of office workers in Minneapolis-St. Paul, MN-WI, February 1989 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[2]	Median[2]	Middle range[2]	175 and under 200	200 – 225	225 – 250	250 – 275	275 – 300	300 – 325	325 – 350	350 – 375	375 – 400	400 – 425	425 – 450	450 – 475	475 – 500	500 – 525	525 – 550	550 – 575	575 – 600	600 – 650	650 – 700	700 – 750	750 and over
Key entry operators	2,433	39.5	287.50	276.50	247.50– 320.00	7	202	486	479	326	423	221	160	38	29	19	4	2	28	1	–	8	–	–	–	–
Manufacturing	440	39.5	317.00	320.00	302.00– 337.00	6	–	40	7	34	173	130	21	9	7	9	3	1	–	–	–	–	–	–	–	–
Nonmanufacturing	1,993	39.0	281.50	262.00	246.00– 307.00	1	202	446	472	292	250	91	139	29	22	10	1	1	28	1	–	8	–	–	–	–
Transportation and utilities	112	40.0	377.50	316.00	251.00– 510.00	–	–	–	44	8	5	–	6	–	–	10	*	1	28	1	–	8	–	–	–	–
Key entry operators I	1,404	39.0	263.50	251.50	240.00– 294.50	7	176	454	283	153	243	58	22	5	2	–	–	1	–	–	–	–	–	–	–	–
Manufacturing	205	39.5	291.50	311.00	266.00– 311.50	6	–	40	7	13	119	12	6	2	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	1,199	39.0	259.00	250.50	238.00– 276.50	1	176	414	276	140	124	46	16	3	2	–	–	1	–	–	–	–	–	–	–	–
Key entry operators II	1,029	39.5	320.50	313.00	276.00– 351.00	–	26	32	196	173	180	163	138	33	27	19	4	1	28	1	–	8	–	–	–	–
Manufacturing	235	40.0	339.00	329.50	323.50– 342.00	–	–	–	–	21	54	118	15	7	7	9	3	1	–	–	–	–	–	–	–	–
Nonmanufacturing	794	39.5	315.50	297.00	262.00– 358.00	–	26	32	196	152	126	45	123	26	20	10	1	–	28	1	–	8	–	–	–	–
Transportation and utilities	50	40.0	503.00	510.00	470.00– 510.00	–	–	–	–	–	–	–	2	–	–	10	1	–	28	1	–	8	–	–	–	–
Other clerical occupations																										
Accounting clerks	5,587	39.5	325.50	315.00	280.00– 360.00	–	102	250	984	808	1026	814	534	478	265	216	75	40	20	38	29	6	2	–	–	–
Manufacturing	2,177	39.5	346.50	337.00	307.50– 388.50	–	–	20	154	295	394	380	280	269	200	108	34	27	9	5	1	–	1	–	–	–
Nonmanufacturing	3,510	39.5	313.00	300.00	262.50– 345.50	–	102	230	830	513	632	434	254	209	65	108	41	13	11	33	28	6	1	–	–	–
Accounting clerks I	1,004	40.0	259.00	259.50	250.00– 270.00	–	97	111	642	69	78	3	–	–	2	2	–	–	–	–	–	–	–	–	–	–
Manufacturing	178	40.0	287.50	287.50	273.00– 299.00	–	–	12	64	58	38	2	–	–	2	2	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	826	40.0	253.00	251.00	250.00– 262.50	–	97	99	578	11	40	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Accounting clerks II	2,305	39.5	305.00	300.00	280.00– 328.00	–	5	139	338	625	544	353	194	54	38	3	3	9	–	–	–	–	–	–	–	–
Manufacturing	773	40.0	316.50	309.50	287.50– 336.00	–	–	8	89	225	151	167	70	16	36	2	1	8	–	–	–	–	–	–	–	–
Nonmanufacturing	1,532	39.5	299.50	298.00	274.00– 321.00	–	5	131	249	400	393	186	124	38	2	1	2	1	–	–	–	–	–	–	–	–
Transportation and utilities	235	40.0	313.00	292.50	281.00– 371.50	–	–	15	17	104	17	13	33	30	2	1	2	1	–	–	–	–	–	–	–	–
Accounting clerks III	1,675	39.5	355.50	347.50	318.50– 387.50	–	–	–	4	113	381	388	258	289	99	118	12	6	1	6	–	–	–	–	–	–
Manufacturing	806	39.5	355.00	348.50	321.00– 385.50	–	–	–	1	12	205	191	157	144	56	25	6	4	–	5	–	–	–	–	–	–
Nonmanufacturing	869	39.0	355.50	346.00	318.50– 388.50	–	–	–	3	101	176	197	101	145	43	93	6	2	1	1	–	–	–	–	–	–
Accounting clerks IV	703	39.5	417.00	407.50	374.50– 449.00	–	–	–	–	1	23	70	82	135	126	93	60	25	19	32	29	6	2	–	–	–
Manufacturing	420	39.5	409.50	406.00	381.00– 431.50	–	–	–	–	–	–	20	53	109	106	79	27	15	9	–	1	–	1	–	–	–
Nonmanufacturing	283	40.0	428.50	415.00	345.50– 519.00	–	–	–	–	1	23	50	29	26	20	14	33	10	10	32	28	6	1	–	–	–
Payroll clerks	625	40.0	360.00	352.00	314.50– 400.00	–	1	2	52	77	80	85	118	49	94	22	3	6	4	22	4	6	–	–	–	–
Manufacturing	246	40.0	373.50	357.00	330.00– 407.00	–	–	–	–	31	13	37	51	14	80	4	1	6	2	7	–	–	–	–	–	–
Nonmanufacturing	379	40.0	351.00	343.50	284.00– 381.00	–	1	2	52	46	67	48	67	35	14	18	2	–	2	15	4	6	–	–	–	–
Transportation and utilities	97	40.0	404.50	384.00	292.50– 521.00	–	1	–	18	8	3	–	5	19	3	14	–	–	2	15	3	6	–	–	–	–
File clerks	849	39.0	255.00	248.50	228.00– 278.50	31	84	312	153	97	89	25	3	1	–	–	–	1	3	–	–	–	–	–	–	–
Nonmanufacturing	687	38.5	258.00	250.00	229.00– 292.00	81	36	225	136	95	84	24	2	–	–	–	–	1	3	–	–	–	–	–	–	–
File clerks I	604	39.0	237.50	238.50	223.00– 254.00	81	79	276	137	16	14	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	456	39.0	237.50	237.50	227.00– 260.50	81	31	192	123	16	12	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–
File clerks II	231	38.0	296.50	299.50	287.50– 314.50	–	5	35	16	78	70	23	–	1	–	–	–	–	3	–	–	–	–	–	–	–
Nonmanufacturing	221	38.0	297.50	299.50	292.00– 314.50	–	5	32	13	77	68	23	–	–	–	–	–	–	3	–	–	–	–	–	–	–
Messengers	292	39.5	240.50	229.00	211.00– 255.50	14	118	81	37	19	14	1	–	4	–	–	2	2	–	–	–	–	–	–	–	–
Manufacturing	73	39.0	253.50	241.00	223.50– 264.50	1	19	25	12	4	7	1	–	4	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	219	39.5	236.50	225.00	211.00– 249.50	13	99	56	25	15	7	–	–	–	–	–	2	2	–	–	–	–	–	–	–	–
Order clerks	583	40.0	397.50	393.00	319.50– 472.00	–	1	2	2	32	139	60	17	46	20	12	134	94	10	11	–	1	2	–	–	–
Manufacturing	347	40.0	357.00	337.00	311.00– 393.00	–	–	2	1	30	130	58	17	41	14	12	14	4	10	11	–	1	2	–	–	–

See footnotes at end of tables.

Table A-1. Weekly earnings of office workers in Minneapolis-St. Paul, MN-WI, February 1989 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																			
			Mean[3]	Median[3]	Middle range[3]	175 and under 200	200 – 225	225 – 250	250 – 275	275 – 300	300 – 325	325 – 350	350 – 375	375 – 400	400 – 425	425 – 450	450 – 475	475 – 500	500 – 525	525 – 550	550 – 575	575 – 600	600 – 650	650 – 700	700 – 750	750 and over
Order clerks I	175	40.0	316.50	311.00	310.50– 311.00	-	1	2	2	32	114	9	5	4	1	-	1	-	1	3	-	-	-	-	-	-
Manufacturing	160	40.0	317.50	311.00	311.00– 311.00	-	-	2	1	30	105	7	5	4	1	-	1	-	1	3	-	-	-	-	-	-
Order clerks II	408	40.0	432.50	456.00	390.00– 484.00	-	-	-	-	-	25	51	12	42	19	12	133	94	9	8	-	1	2	-	-	-
Manufacturing	187	40.0	390.50	380.00	337.00– 431.00	-	-	-	-	-	25	51	12	37	13	12	13	4	9	8	-	1	2	-	-	-
Receptionists	399	40.0	291.50	291.50	273.00– 315.00	-	6	33	61	147	84	38	20	5	3	2	-	-	-	-	-	-	-	-	-	-
Manufacturing	135	40.0	305.50	293.50	280.00– 317.00	-	6	-	5	61	33	11	15	2	2	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing	264	40.0	289.00	289.50	272.50– 300.00	-	-	33	56	86	51	27	5	3	1	2	-	-	-	-	-	-	-	-	-	-
Switchboard operators	304	40.0	297.00	272.5	259.00– 320.00	1	29	44	84	55	22	13	23	-	10	5	-	2	16	-	-	-	-	-	-	-
Manufacturing	107	40.0	290.50	275.00	259.00– 316.00	-	-	2	50	23	9	5	17	-	-	1	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing	197	40.0	300.50	272.50	240.00– 322.50	1	29	42	34	32	13	8	6	-	10	4	-	2	16	-	-	-	-	-	-	-
Switchboard operator-receptionists	912	39.5	291.50	292.50	259.00– 321.50	5	55	143	168	128	247	64	64	28	3	4	-	3	-	-	-	-	-	-	-	-
Manufacturing	276	40.0	296.50	302.00	270.00– 304.50	-	1	33	64	35	108	5	2	24	3	-	-	1	-	-	-	-	-	-	-	-
Nonmanufacturing	636	39.5	289.50	288.00	249.50– 324.50	5	54	110	104	93	139	59	62	4	-	4	-	2	-	-	-	-	-	-	-	-
Transportation and utilities	50	40.0	246.50	239.00	224.00– 254.00	-	22	15	3	2	-	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-

See footnotes at end of tables.

Table A-2. Weekly earnings of professional and technical workers in Minneapolis-St. Paul, MN-WI, February 1989

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[2]	Median[2]	Middle range[2]	225 and under 250	250 – 275	275 – 300	300 – 350	350 – 400	400 – 450	450 – 500	500 – 550	550 – 600	600 – 650	650 – 700	700 – 750	750 – 800	800 – 850	850 – 900	900 – 950	950 – 1000	1000 – 1050	1050 – 1100	1100 – 1150	1150 – 1200
Computer systems analysts	3,942	39.0	715.00	710.00	631.00– 779.00	–	–	–	–	–	1	31	165	364	660	630	820	420	370	222	136	92	18	20	–	3
Manufacturing	1,018	40.0	763.50	749.50	672.00– 855.50	–	–	–	–	–	1	7	8	86	110	131	166	126	117	110	59	72	15	7	–	3
Nonmanufacturing	2,924	39.0	698.00	691.00	619.00– 752.50	–	–	–	–	–	–	24	157	278	550	499	654	294	253	112	77	10	3	13	–	–
Computer systems analysts I	1,227	39.0	617.00	613.00	576.00– 656.00	–	–	–	–	–	1	30	147	291	407	217	126	8	–	–	–	–	–	–	–	–
Manufacturing	184	40.0	602.50	598.00	568.00– 638.00	–	–	–	–	–	1	7	7	79	60	25	4	1	–	–	–	–	–	–	–	–
Nonmanufacturing	1,043	39.0	619.50	614.50	576.00– 660.00	–	–	–	–	–	–	23	140	212	347	192	122	7	–	–	–	–	–	–	–	–
Computer systems analysts II	1,454	39.5	704.00	703.00	653.00– 743.00	–	–	–	–	–	–	1	18	73	236	392	433	168	82	21	27	1	–	–	–	–
Manufacturing	363	39.5	716.00	714.50	672.00– 757.00	–	–	–	–	–	–	–	1	7	50	96	114	63	24	8	–	–	–	–	–	–
Nonmanufacturing	1,091	39.0	700.00	692.50	650.50– 737.50	–	–	–	–	–	–	1	17	66	188	296	319	105	58	13	27	1	–	–	–	–
Transportation and utilities	125	40.0	790.00	779.00	749.00– 835.50	–	–	–	–	–	–	–	–	–	–	10	22	42	31	12	7	1	–	–	–	–
Computer systems analysts III	1,072	39.0	806.00	802.00	743.00– 849.50	–	–	–	–	–	–	–	–	–	15	19	261	238	273	138	71	42	4	11	–	–
Manufacturing	336	39.5	836.50	835.00	776.00– 888.50	–	–	–	–	–	–	–	–	–	–	8	48	57	84	66	31	39	2	1	–	–
Nonmanufacturing	736	39.0	792.50	785.50	741.00– 828.50	–	–	–	–	–	–	–	–	–	15	11	213	181	189	72	40	3	2	10	–	–
Computer systems analysts IV	189	40.0	920.50	911.50	870.00– 969.50	–	–	–	–	–	–	–	–	–	–	2	–	6	15	63	38	39	14	9	–	3
Nonmanufacturing	54	40.0	899.50	870.00	870.00– 936.50	–	–	–	–	–	–	–	–	–	–	–	–	1	6	27	10	6	1	3	–	–
Computer programmers	2,399	39.0	531.50	519.50	459.50– 594.50	–	–	–	51	58	328	500	462	439	307	155	63	14	15	2	2	–	–	–	–	–
Manufacturing	671	40.0	561.00	569.00	473.00– 644.00	–	–	–	24	25	50	98	100	97	129	92	41	12	2	1	–	–	–	–	–	–
Nonmanufacturing	1,728	39.0	519.50	514.50	459.00– 570.00	–	–	–	30	33	278	402	362	342	178	63	22	2	13	1	2	–	–	–	–	–
Computer programmers I	510	39.0	437.50	422.50	417.50– 468.00	–	–	–	54	40	226	112	51	25	2	–	–	–	–	–	–	–	–	–	–	–
Manufacturing	121	40.0	420.00	417.50	393.50– 459.50	–	–	–	24	25	36	15	19	1	1	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	389	39.0	442.50	424.50	418.50– 471.50	–	–	–	30	15	190	97	32	24	1	–	–	–	–	–	–	–	–	–	–	–
Computer programmers II	1,059	39.0	509.00	509.00	470.50– 548.00	–	–	–	–	18	98	358	326	196	53	6	4	–	–	–	–	–	–	–	–	–
Manufacturing	166	39.5	501.00	490.00	470.00– 532.00	–	–	–	–	–	14	76	51	19	4	2	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	893	38.5	510.00	509.00	471.50– 557.00	–	–	–	–	18	84	282	275	177	49	4	4	–	–	–	–	–	–	–	–	–
Computer programmers III	721	39.5	603.50	604.00	561.00– 637.00	–	–	–	–	–	4	30	85	218	242	104	24	2	10	2	–	–	–	–	–	–
Manufacturing	319	40.0	614.50	622.00	576.00– 652.00	–	–	–	–	–	–	7	30	77	117	73	14	–	–	1	–	–	–	–	–	–
Nonmanufacturing	402	39.0	595.00	596.00	557.50– 633.50	–	–	–	–	–	4	23	55	141	125	31	10	2	10	1	–	–	–	–	–	–
Computer programmers IV	109	40.0	711.00	698.50	681.00– 725.50	–	–	–	–	–	–	–	–	–	10	45	35	12	5	–	2	–	–	–	–	–
Computer operators	1,639	39.5	396.50	384.50	350.00– 429.50	4	41	46	305	572	336	162	108	38	23	2	–	1	1	–	–	–	–	–	–	–
Manufacturing	726	40.0	396.00	391.50	352.00– 425.00	–	3	17	153	247	177	77	44	7	–	1	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	913	39.5	397.00	377.00	350.00– 436.50	4	38	29	152	325	159	85	64	31	23	1	–	1	1	–	–	–	–	–	–	–
Transportation and utilities	106	40.0	501.00	532.00	422.50– 562.50	–	–	–	3	18	21	6	13	27	18	–	–	–	–	–	–	–	–	–	–	–
Computer operators I	145	39.5	302.50	300.00	273.50– 313.50	4	37	28	59	17	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	113	39.5	296.50	293.00	273.50– 300.00	4	35	22	43	9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Computer operators II	872	40.0	369.50	363.50	346.00– 391.50	–	4	18	218	440	161	20	11	–	–	–	–	–	–	–	–	–	–	–	–	–
Manufacturing	399	40.0	375.50	376.00	340.00– 401.00	–	1	11	119	164	78	16	10	–	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	473	39.5	364.50	360.00	350.00– 384.50	–	3	7	99	276	83	4	1	–	–	–	–	–	–	–	–	–	–	–	–	–
Computer operators III	449	39.5	444.00	436.00	394.00– 490.00	–	–	–	28	107	114	103	63	30	2	2	–	–	–	–	–	–	–	–	–	–
Manufacturing	214	39.5	423.00	410.50	390.00– 459.50	–	–	–	18	67	68	34	23	3	–	1	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	235	39.5	463.00	464.00	413.50– 508.00	–	–	–	10	40	46	69	40	27	2	1	–	–	–	–	–	–	–	–	–	–
Computer operators IV	155	39.5	469.00	460.00	423.00– 502.00	–	–	–	–	8	61	39	34	8	3	–	–	1	1	–	–	–	–	–	–	–
Drafters	1,536	40.0	499.50	497.00	420.00– 567.50	–	4	–	105	157	294	262	263	170	141	74	53	10	3	–	–	–	–	–	–	–
Manufacturing	1,037	40.0	502.50	499.00	415.00– 568.00	–	–	–	67	115	172	179	199	119	83	54	36	10	3	–	–	–	–	–	–	–
Nonmanufacturing	499	40.0	493.00	480.00	421.00– 566.50	–	4	–	38	42	122	83	64	51	58	20	17	–	–	–	–	–	–	–	–	–

See footnotes at end of tables.

Table A-2. Weekly earnings of professional and technical workers in Minneapolis-St. Paul, MN-WI, February 1989 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																			
			Mean[3]	Median[3]	Middle range[4]	225 and under 250	250 - 275	275 - 300	300 - 350	350 - 400	400 - 450	450 - 500	500 - 550	550 - 600	600 - 650	650 - 700	700 - 750	750 - 800	800 - 850	850 - 900	900 - 950	950 - 1000	1000 - 1050	1050 - 1100	1100 - 1150	1150 - 1200
Drafters II	207	40.0	368.00	370.00	346.00- 401.50	-	-	-	82	73	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	134	40.0	365.00	383.50	334.00- 402.00	-	-	-	56	42	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Drafters III	349	40.0	424.50	422.50	400.00- 442.50	-	-	-	11	72	183	75	8	-	-	-	-	-	-	-	-	-	-	-	-
Manufacturing	218	40.0	418.50	412.50	387.00- 442.50	-	-	-	9	61	97	46	5	-	-	-	-	-	-	-	-	-	-	-	-
Nonmanufacturing	131	40.0	434.50	437.00	410.00- 442.50	-	-	-	2	11	86	29	3	-	-	-	-	-	-	-	-	-	-	-	-
Drafters IV	572	40.0	525.50	523.00	480.00- 561.50	-	-	-	-	12	57	148	183	105	38	12	14	3	-	-	-	-	-	-	-
Manufacturing	391	40.0	527.50	520.00	479.00- 558.00	-	-	-	-	12	37	95	137	60	18	12	14	3	-	-	-	-	-	-	-
Nonmanufacturing	181	40.0	521.50	523.00	480.00- 564.50	-	-	-	-	-	20	50	46	45	20	-	-	-	-	-	-	-	-	-	-
Drafters V	392	40.0	605.50	610.00	540.00- 668.00	-	-	-	-	-	2	39	72	65	103	62	39	7	3	-	-	-	-	-	-
Manufacturing	292	40.0	597.00	593.50	528.50- 655.50	-	-	-	-	-	2	35	57	59	65	42	22	7	3	-	-	-	-	-	-
Nonmanufacturing	100	40.0	630.00	641.00	593.00- 682.00	-	-	-	-	-	-	4	15	6	38	20	17	-	-	-	-	-	-	-	-
Electronics technicians	1,727	40.0	558.00	546.50	474.00- 642.00	-	-	-	1	55	218	319	284	261	188	217	148	33	3	-	-	-	-	-	-
Manufacturing	1,635	40.0	552.00	542.00	470.00- 629.00	-	-	-	1	55	215	309	281	258	179	184	117	33	3	-	-	-	-	-	-
Nonmanufacturing:																									
Transportation and utilities	92	40.0	660.00	696.00	619.00- 737.00	-	-	-	-	-	3	10	3	3	9	33	31	-	-	-	-	-	-	-	-
Electronics technicians I:																									
Manufacturing	150	40.0	424.50	421.50	401.50- 450.00	-	-	-	1	34	77	29	9	-	-	-	-	-	-	-	-	-	-	-	-
Electronics technicians III	729	40.0	636.50	642.00	579.50- 692.00	-	-	-	-	-	-	20	78	131	165	183	119	33	3	-	-	-	-	-	-
Manufacturing	725	40.0	636.50	641.50	578.00- 692.50	-	-	-	-	-	-	20	78	131	161	183	119	33	3	-	-	-	-	-	-
Registered industrial nurses	63	40.0	586.00	570.50	549.00- 633.00	-	-	-	-	-	-	2	22	14	17	6	1	1	-	-	-	-	-	-	-

See footnotes at end of tables.

Table A-3. Average weekly earnings of office, professional, and technical workers, by sex, in Minneapolis-St. Paul, MN-WI, February 1989

Sex,[4] occupation, and industry division	Number of workers	Average (mean[5]) Weekly hours[1] (standard)	Average (mean[5]) Weekly earnings (in dollars)[2]
Office occupations - men			
Accounting clerks:			
Accounting clerks I:			
Nonmanufacturing	80	40.0	261.00
File clerks	176	38.5	229.50
Nonmanufacturing	175	38.5	229.50
File clerks I	161	38.5	225.00
Nonmanufacturing	161	38.5	225.00
Messengers	79	39.5	242.50
Nonmanufacturing	70	39.5	238.00
Office occupations - women			
Secretaries	5,565	39.5	400.50
Nonmanufacturing	2,692	39.0	394.50
Secretaries II	1,411	38.5	355.00
Nonmanufacturing	989	38.0	355.00
Secretaries III	2,015	39.5	390.50
Manufacturing	904	40.0	376.50
Nonmanufacturing	1,111	39.5	402.00
Secretaries IV	1,319	40.0	431.50
Manufacturing	829	40.0	424.50
Nonmanufacturing	490	39.5	442.50
Transportation and utilities	61	40.0	500.00
Stenographers	76	40.0	393.00
Nonmanufacturing:			
Transportation and utilities	43	40.0	436.50
Stenographers I	51	40.0	418.50
Nonmanufacturing:			
Transportation and utilities	43	40.0	436.50
Typists	412	39.0	283.50
Nonmanufacturing	304	38.5	282.00
Typists I	216	38.5	257.00
Nonmanufacturing	198	38.5	255.00
Typists II	196	39.0	313.00
Word processors	900	39.0	342.00
Manufacturing	201	39.5	344.00
Nonmanufacturing	699	39.0	341.50
Word processors I	300	39.0	297.00
Manufacturing	90	39.5	299.00
Nonmanufacturing	210	39.0	296.50
Word processors II	600	39.5	364.50
Manufacturing	111	39.5	380.50
Nonmanufacturing	489	39.5	360.50
Key entry operators	2,302	39.0	284.00
Manufacturing	403	40.0	316.00
Nonmanufacturing	1,899	39.0	277.50
Key entry operators I	1,325	39.0	261.00
Manufacturing	181	39.5	288.50
Nonmanufacturing	1,144	39.0	256.50
Key entry operators II	977	39.5	315.50
Manufacturing	222	40.0	338.00
Nonmanufacturing	755	39.5	308.50
Accounting clerks	4,449	40.0	318.50
Nonmanufacturing	2,731	39.5	304.50
Accounting clerks I	897	40.0	258.00
Manufacturing	161	40.0	287.50
Nonmanufacturing	736	40.0	251.50
Accounting clerks II	2,029	39.5	304.50
Manufacturing	672	40.0	315.50
Nonmanufacturing	1,357	39.5	299.00
Transportation and utilities	223	40.0	311.50
Accounting clerks III	1,150	39.5	361.50
Manufacturing	659	40.0	356.50
Nonmanufacturing	491	39.5	368.50
Payroll clerks	569	40.0	354.00
Manufacturing	231	40.0	377.00
Nonmanufacturing	338	40.0	338.00
Transportation and utilities	74	40.0	366.50
File clerks	663	39.0	260.50
Nonmanufacturing	502	38.5	266.50
File clerks I	440	39.5	241.50
Nonmanufacturing	292	39.0	244.50
Messengers	204	39.0	237.50
Manufacturing	61	39.0	252.00
Nonmanufacturing	143	39.5	231.50
Order clerks	356	40.0	351.50
Manufacturing	336	40.0	352.50
Order clerks I	175	40.0	316.50
Manufacturing	160	40.0	317.50
Order clerks II	181	40.0	385.00
Manufacturing	176	40.0	384.50
Receptionists	378	40.0	293.00
Manufacturing	129	40.0	304.50
Nonmanufacturing	249	40.0	287.00
Switchboard operators	268	40.0	285.00
Manufacturing	93	40.0	288.50
Nonmanufacturing	175	40.0	283.50
Switchboard operator-receptionists	909	39.5	291.50
Manufacturing	276	40.0	296.50
Nonmanufacturing	633	39.5	289.50
Transportation and utilities	50	40.0	246.50
Professional and technical occupations - men			
Computer programmers:			
Computer programmers IV	77	40.0	714.00
Computer operators:			
Computer operators III:			
Manufacturing	126	40.0	421.50
Computer operators IV:			
Nonmanufacturing	53	39.5	476.00
Drafters	1,228	40.0	495.00
Nonmanufacturing	461	40.0	492.50
Drafters II	174	40.0	368.50
Manufacturing	103	40.0	364.50
Drafters III	265	40.0	422.50
Nonmanufacturing	124	40.0	433.50
Drafters IV	481	40.0	526.00
Manufacturing	316	40.0	527.50
Nonmanufacturing	165	40.0	523.00
Drafters V:			
Nonmanufacturing	91	40.0	631.50
Electronics technicians:			
Electronics technicians III	594	40.0	634.00
Manufacturing	590	40.0	634.00

See footnotes at end of tables.

Table A-4. Hourly earnings of maintenance, toolroom, and powerplant workers in Minneapolis-St. Paul, MN-WI, February 1989

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[2]			Number of workers receiving straight-time hourly earnings (in dollars) of —																						
		Mean[3]	Median[3]	Middle range[3]	Under 7.00	7.00 and under 7.50	7.50 – 8.00	8.00 – 8.50	8.50 – 9.00	9.00 – 9.50	9.50 – 10.00	10.00 – 10.50	10.50 – 11.00	11.00 – 11.50	11.50 – 12.00	12.00 – 12.50	12.50 – 13.00	13.00 – 13.50	13.50 – 14.00	14.00 – 14.50	14.50 – 15.00	15.00 – 16.00	16.00 – 17.00	17.00 – 18.00	18.00 – 19.00	19.00 – 20.00	20.00 – 21.00
Maintenance carpenters	134	14.91	15.72	13.57–16.16	–	–	–	–	–	–	–	–	1	8	1	3	2	16	20	6	–	24	46	5	–	2	–
Manufacturing	86	14.73	15.47	13.57–16.16	–	–	–	–	–	–	–	–	1	8	1	–	–	–	20	6	–	21	28	1	–	–	–
Maintenance electricians	574	15.81	15.28	14.44–16.77	–	–	–	–	–	–	–	–	–	–	1	–	2	7	2	226	4	85	169	19	30	4	25
Manufacturing	553	15.71	15.28	14.44–16.45	–	–	–	–	–	–	–	–	–	–	1	–	2	7	2	226	4	85	165	18	18	–	25
Maintenance painters	70	15.71	16.27	16.16–16.27	–	–	–	–	–	–	–	1	–	–	–	–	2	9	2	2	–	–	51	–	1	2	–
Manufacturing	59	15.43	16.27	14.13–16.27	–	–	–	–	–	–	–	1	–	–	–	–	2	9	2	2	–	–	43	–	–	–	–
Maintenance machinists	500	15.66	16.37	14.85–16.37	–	–	–	–	–	–	–	–	–	–	–	–	14	3	90	–	21	115	231	–	11	–	15
Manufacturing	489	15.59	16.37	14.53–16.37	–	–	–	–	–	–	–	–	–	–	–	–	14	3	90	–	21	115	231	–	–	–	15
Maintenance mechanics (machinery)	1,162	14.11	13.71	13.71–15.15	–	–	–	–	–	2	–	2	24	28	1	54	81	10	498	64	15	319	54	–	–	10	–
Manufacturing	1,135	14.06	13.71	13.71–15.15	–	–	–	–	–	2	–	2	24	28	1	47	81	10	498	64	15	319	44	–	–	–	–
Maintenance pipefitters	204	15.78	15.15	15.15–16.72	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6	4	118	71	–	–	1	4
Manufacturing	199	15.68	15.15	15.15–16.72	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6	4	118	71	–	–	–	–
Millwrights	172	16.04	16.16	16.16–16.32	–	–	–	–	–	–	–	–	–	–	–	–	4	2	2	–	1	11	152	–	–	–	–
Manufacturing	172	16.04	16.16	16.16–16.32	–	–	–	–	–	–	–	–	–	–	–	–	4	2	2	–	1	11	152	–	–	–	–
Motor vehicle mechanics	596	13.15	13.58	10.46–15.43	–	–	–	–	6	66	16	81	18	29	18	16	31	6	76	8	20	98	50	51	–	6	–
Manufacturing	75	14.53	13.86	13.80–15.47	–	–	–	–	–	–	–	–	–	–	1	11	1	–	34	4	–	10	8	–	–	6	–
Nonmanufacturing	521	12.95	12.85	10.46–15.43	–	–	–	–	6	66	16	81	18	29	17	5	30	6	42	4	20	88	42	51	–	–	–
Transportation and utilities	491	12.87	12.74	10.46–15.43	–	–	–	–	6	66	15	81	18	27	15	3	28	4	41	4	16	74	42	51	–	–	–
General maintenance workers	760	10.97	11.02	9.00–12.80	24	7	29	35	79	53	2	47	73	83	35	95	121	13	17	–	2	39	–	6	–	–	–
Manufacturing	484	11.38	11.17	10.00–12.98	–	1	–	24	50	37	–	26	66	45	24	50	100	13	15	–	2	31	–	–	–	–	–
Nonmanufacturing	276	10.25	10.58	8.20–12.04	24	6	29	11	29	16	2	21	7	38	11	45	21	–	2	–	–	8	–	6	–	–	–
Transportation and utilities	29	11.38	8.80	8.80–12.02	–	–	–	–	15	–	–	–	–	–	–	8	–	–	–	–	–	–	–	6	–	–	–
Maintenance trades helpers	66	10.61	11.01	7.50–13.25	–	–	24	–	–	1	3	–	4	3	1	3	–	27	–	–	–	–	–	–	–	–	–
Manufacturing	58	10.54	11.01	7.50–13.25	–	–	24	–	–	–	–	–	4	3	1	–	–	26	–	–	–	–	–	–	–	–	–
Tool and die makers	443	16.22	17.02	15.50–17.02	–	–	–	–	–	–	–	–	–	2	12	2	–	4	–	2	20	142	20	229	10	–	–
Manufacturing	420	16.14	17.02	15.37–17.02	–	–	–	–	–	–	–	–	–	2	12	2	–	4	–	2	20	142	20	215	1	–	–
Stationary engineers	220	14.45	14.35	13.41–15.65	–	–	–	–	–	–	–	12	–	2	2	13	4	33	3	56	19	35	23	5	1	12	–
Manufacturing	80	14.92	15.19	14.14–15.77	–	–	–	–	–	–	–	–	–	2	2	–	1	6	–	21	4	25	19	–	–	–	–
Nonmanufacturing	140	14.19	14.22	13.07–14.78	–	–	–	–	–	–	–	12	–	–	–	13	3	27	3	35	15	10	4	5	1	12	–

See footnotes at end of tables.

Table A-5. Hourly earnings of material movement and custodial workers in Minneapolis-St. Paul, MN-WI, February 1989

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[2]			Number of workers receiving straight-time hourly earnings (in dollars) of —																					
		Mean[3]	Median[3]	Middle range[3]	3.85 and under 4.00	4.00 – 4.50	4.50 – 5.00	5.00 – 5.50	5.50 – 6.00	6.00 – 6.50	6.50 – 7.00	7.00 – 7.50	7.50 – 8.00	8.00 – 8.50	8.50 – 9.00	9.00 – 9.50	9.50 – 10.00	10.00 – 11.00	11.00 – 12.00	12.00 – 13.00	13.00 – 14.00	14.00 – 15.00	15.00 – 16.00	16.00 – 17.00	17.00 – 18.00	18.00 – 19.00	19.00 – 20.00
Truckdrivers	3,419	12.70	13.04	10.58–15.74	-	-	21	88	124	29	35	9	25	12	48	30	95	466	514	211	353	101	1117	-	-	-	141
Manufacturing	757	13.09	11.82	10.68–13.80	-	-	-	-	-	-	-	2	24	2	-	-	58	142	205	48	106	29	-	-	-	-	141
Nonmanufacturing	2,662	12.59	13.21	10.22–15.74	-	-	21	88	124	29	35	7	1	10	48	30	37	324	309	163	247	72	1117	-	-	-	-
Transportation and utilities	1,764	13.25	15.06	12.74–15.74	-	-	21	88	124	6	8	-	1	4	46	-	34	34	18	136	197	6	1041	-	-	-	-
Truckdrivers, light truck	613	12.13	11.60	9.25–13.33	-	-	21	13	4	29	32	6	25	8	1	29	36	73	35	144	16	-	-	-	-	-	141
Manufacturing	274	15.09	19.53	10.21–19.53	-	-	-	-	-	-	-	2	24	2	-	-	32	10	35	12	16	-	-	-	-	-	141
Nonmanufacturing	339	9.73	10.15	6.50–12.74	-	-	21	13	4	29	32	4	1	6	1	29	4	63	-	132	-	-	-	-	-	-	-
Truckdrivers, medium truck	983	14.43	15.74	12.90–15.74	-	-	-	-	-	-	2	3	-	4	-	-	29	20	169	27	12	59	658	-	-	-	-
Truckdrivers, heavy truck	961	9.91	10.22	9.77–11.46	-	-	-	75	120	-	-	-	-	-	45	-	30	365	221	6	95	4	-	-	-	-	-
Nonmanufacturing	770	9.41	10.22	5.96–11.46	-	-	-	75	120	-	-	-	-	-	45	-	30	251	221	5	23	-	-	-	-	-	-
Truckdrivers, tractor-trailer	614	14.90	15.12	14.85–15.99	-	-	-	-	-	-	-	-	-	-	2	-	-	8	1	34	75	35	459	-	-	-	-
Manufacturing	52	13.67	13.99	12.60–14.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	8	24	-	-	-	-	-
Nonmanufacturing	562	15.01	15.21	15.06–15.99	-	-	-	-	-	-	-	-	-	-	2	-	-	8	1	14	67	11	459	-	-	-	-
Transportation and utilities	440	15.24	15.21	15.06–15.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	3	383	-	-	-	-
Shippers	210	11.80	11.82	11.58–13.74	-	-	-	-	-	-	-	-	6	2	15	20	1	3	91	5	55	4	8	-	-	-	-
Manufacturing	152	11.61	11.58	9.23–13.74	-	-	-	-	-	-	-	-	6	2	12	20	1	3	51	1	54	2	-	-	-	-	-
Receivers	202	9.62	11.17	5.75–11.92	-	-	2	37	26	1	2	4	5	3	8	6	1	2	58	12	31	4	-	-	-	-	-
Nonmanufacturing	153	9.12	8.97	5.35–11.82	-	-	2	37	26	1	2	2	5	1	3	1	1	-	42	1	25	4	-	-	-	-	-
Shippers and receivers	906	8.70	9.39	5.14–11.64	-	-	108	138	54	21	13	72	6	25	2	23	50	135	189	7	36	-	27	-	-	-	-
Manufacturing	438	9.73	9.95	7.32–11.68	-	-	-	-	48	12	13	72	1	25	-	-	50	3	172	6	36	-	-	-	-	-	-
Nonmanufacturing	468	7.74	5.14	5.00–10.94	-	-	108	138	6	9	-	-	5	-	2	23	-	132	17	1	-	-	27	-	-	-	-
Warehousemen	2,593	11.19	10.43	10.43–11.70	-	-	-	-	-	14	-	3	37	73	9	13	10	1430	517	122	114	79	172	-	-	-	-
Manufacturing	658	10.83	10.44	10.17–11.85	-	-	-	-	-	-	-	-	4	50	6	8	8	338	126	82	21	12	3	-	-	-	-
Nonmanufacturing	1,935	11.31	10.43	10.43–11.70	-	-	-	-	-	14	-	3	33	23	3	5	2	1092	391	40	93	67	169	-	-	-	-
Transportation and utilities	53	13.17	13.16	12.74–13.16	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	16	21	11	-	-	-	-	-
Order fillers	1,765	11.08	10.84	10.84–12.11	-	-	-	-	-	96	3	18	51	90	35	-	11	924	94	253	5	38	-	147	-	-	-
Manufacturing	703	10.17	10.92	8.23–12.11	-	-	-	-	-	96	-	12	42	87	35	-	4	97	89	237	4	-	-	-	-	-	-
Shipping packers	381	9.97	10.32	8.65–11.05	-	-	-	-	-	-	24	-	2	32	92	7	-	54	130	40	-	-	-	-	-	-	-
Manufacturing	381	9.97	10.32	8.65–11.05	-	-	-	-	-	-	24	-	2	32	92	7	-	54	130	40	-	-	-	-	-	-	-
Material handling laborers	1,142	11.57	11.25	9.71–15.06	-	-	2	1	19	3	7	103	12	27	64	41	22	229	170	66	63	6	292	-	-	-	15
Manufacturing	733	10.07	10.73	8.51–11.24	-	-	-	-	18	2	6	100	12	24	64	40	22	228	146	56	-	-	-	-	-	-	15
Nonmanufacturing	409	14.27	15.06	13.55–15.06	-	-	2	1	1	1	1	3	-	3	-	1	-	1	24	10	63	6	292	-	-	-	-
Transportation and utilities	395	14.53	15.06	14.31–15.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	10	63	6	292	-	-	-	-
Forklift operators	762	12.03	12.10	11.25–12.83	-	-	-	1	-	-	-	2	4	-	10	2	36	81	233	255	92	12	32	-	-	-	-
Manufacturing	683	11.82	11.98	11.25–12.83	-	-	-	-	-	-	-	2	-	-	10	2	36	81	233	255	64	-	-	-	-	-	-
Nonmanufacturing	79	13.87	14.96	13.89–15.11	-	-	2	1	-	-	-	-	4	-	-	-	-	-	-	-	28	12	32	-	-	-	-
Guards	4,564	6.06	5.25	5.00– 6.00	49	495	564	1354	786	373	200	57	18	55	49	25	10	169	239	61	34	25	1	-	-	-	-
Manufacturing	494	10.90	11.06	10.28–11.18	-	-	-	-	12	-	12	-	5	12	3	22	7	152	175	61	29	3	1	-	-	-	-
Nonmanufacturing	4,070	5.47	5.25	4.75– 5.75	49	495	564	1354	774	373	188	57	13	43	46	3	3	17	64	-	5	22	-	-	-	-	-
Guards I:																											
Manufacturing	463	10.83	11.06	10.14–11.08	-	-	-	-	12	-	12	-	5	12	3	22	7	144	175	38	29	3	1	-	-	-	-
Janitors, porters, and cleaners	7,431	6.53	5.47	5.30– 7.50	-	10	767	2968	555	762	330	166	648	116	125	71	70	416	274	89	64	-	-	-	-	-	-
Manufacturing	1,308	9.64	10.32	8.00–11.04	-	-	1	29	30	10	55	88	98	55	84	60	66	397	252	54	29	-	-	-	-	-	-
Nonmanufacturing	6,123	5.86	5.45	5.15– 6.35	-	10	766	2939	525	752	275	78	550	61	41	11	4	19	22	35	35	-	-	-	-	-	-
Transportation and utilities	139	11.34	12.21	10.22–13.65	-	-	-	-	-	15	-	-	-	2	-	7	4	19	22	35	35	-	-	-	-	-	-

See footnotes at end of tables.

Table A-6. Average hourly earnings of maintenance, toolroom, powerplant, material movement, and custodial workers, by sex, in Minneapolis-St. Paul, MN-WI, February 1989

Sex,[1] occupation, and industry division	Number of workers	Average (mean[2]) hourly earnings (in dollars)[2]
Maintenance, toolroom, and powerplant occupations - men		
Maintenance carpenters	124	15.05
Manufacturing	84	14.75
Maintenance electricians	563	15.81
Manufacturing	543	15.71
Maintenance painters	68	15.70
Manufacturing	57	15.40
Maintenance machinists	493	15.66
Manufacturing	482	15.59
Maintenance mechanics (machinery)	1,146	14.09
Manufacturing	1,129	14.05
Maintenance pipefitters	204	15.78
Manufacturing	199	15.68
Millwrights	171	16.04
Manufacturing	171	16.04
Motor vehicle mechanics	555	12.91
Manufacturing	75	14.53
Nonmanufacturing	480	12.66
Transportation and utilities	451	12.56
General maintenance workers	741	10.92
Manufacturing	469	11.31
Nonmanufacturing	272	10.25
Transportation and utilities	29	11.38
Maintenance trades helpers	61	10.54
Manufacturing	54	10.43
Tool and die makers	411	16.28
Manufacturing	388	16.19
Stationary engineers	215	14.40
Manufacturing	80	14.92
Nonmanufacturing	135	14.09
Material movement and custodial occupations - men		
Truckdrivers:		
Manufacturing	748	13.09
Truckdrivers, light truck	603	12.18
Manufacturing	270	15.13
Nonmanufacturing	333	9.79
Truckdrivers, heavy truck	960	9.91
Nonmanufacturing	770	9.41
Truckdrivers, tractor-trailer:		
Manufacturing	52	13.67
Shippers	178	11.85
Manufacturing	126	11.64
Receivers	182	9.53
Nonmanufacturing	152	9.10
Shippers and receivers	671	9.58
Manufacturing	318	10.63
Nonmanufacturing	353	8.63
Warehousemen	2,479	11.20
Manufacturing	573	10.88
Nonmanufacturing	1,906	11.30
Transportation and utilities	52	13.18
Order fillers	1,434	11.53
Manufacturing	401	11.29
Material handling laborers	983	11.79
Manufacturing	575	10.03
Nonmanufacturing	408	14.27
Transportation and utilities	394	14.53
Forklift operators	702	12.07
Manufacturing	623	11.84
Nonmanufacturing	79	13.87
Guards:		
Manufacturing	427	10.87
Guards I:		
Manufacturing	400	10.80
Janitors, porters, and cleaners:		
Manufacturing	938	9.58
Material movement and custodial occupations - women		
Shippers and receivers	225	5.88
Warehousemen	95	10.29
Manufacturing	85	10.50
Order fillers	331	9.10
Manufacturing	302	8.68
Shipping packers	229	10.10
Manufacturing	229	10.10
Guards:		
Manufacturing	67	11.15
Guards I:		
Manufacturing	63	11.07

See footnotes at end of tables.

Table A-7. Indexes of earnings and percent increases for selected occupational groups, Minneapolis-St. Paul, MN-WI, selected periods

Period[a]	All industries					Manufacturing					Nonmanufacturing			
	Office clerical	Electronic data processing	Industrial nurses	Skilled maintenance	Unskilled plant	Office clerical	Electronic data processing	Industrial nurses	Skilled maintenance	Unskilled plant	Office clerical	Electronic data processing	Industrial nurses	Unskilled plant
Indexes (January 1977 = 100):														
February 1988	215.3	208.1	230.5	197.4	190.0	213.6	209.6	(*)	199.4	205.2	216.2	207.8	(*)	183.9
February 1989	224.6	215.8	240.9	201.5	196.3	224.1	216.3	(*)	203.2	208.3	224.6	215.9	(*)	191.6
Percent increases:														
January 1972 to January 1973	5.1	(*)	5.9	6.8	6.8	4.2	(*)	5.4	6.4	6.3	5.5	(*)	(*)	7.1
January 1973 to January 1974	6.2	(*)	5.6	6.4	6.1	5.4	(*)	6.4	6.1	6.6	6.7	(*)	(*)	5.8
January 1974 to January 1975	8.6	8.4	7.8	9.2	9.3	7.7	6.9	6.5	9.0	9.3	9.0	10.2	(*)	9.2
January 1975 to January 1976	7.7	6.5	9.9	8.1	7.7	7.9	5.0	9.8	8.9	10.1	7.6	7.8	(*)	6.7
January 1976 to January 1977	7.9	5.5	8.2	8.7	8.9	8.1	5.8	5.0	8.6	8.3	7.7	5.0	(*)	9.2
January 1977 to January 1978	8.0	7.3	6.8	8.2	8.1	7.1	6.5	6.3	8.1	9.5	8.4	8.1	(*)	7.5
January 1978 to January 1979	8.6	8.5	7.6	8.3	8.1	8.7	8.5	7.5	8.5	8.7	8.5	8.4	(*)	7.9
January 1979 to January 1980	9.1	9.7	10.3	10.4	10.8	8.0	8.6	10.2	9.7	9.9	9.8	10.7	(*)	11.1
January 1980 to January 1981	11.6	10.0	14.7	11.7	11.1	11.6	10.5	15.1	11.4	11.1	11.6	9.6	(*)	11.1
January 1981 to Januray 1982	9.2	8.9	12.5	9.7	8.0	9.2	9.7	12.6	9.8	10.5	9.2	8.3	(*)	6.9
January 1982 to January 1983	7.8	6.9	6.7	5.7	5.9	8.0	7.0	6.2	5.8	7.2	7.7	6.9	(*)	5.3
January 1983 to January 1984	5.9	5.9	6.7	4.6	3.3	6.2	5.9	6.6	4.9	5.6	5.7	5.9	(*)	2.4
January 1984 to January 1985	5.0	5.5	6.8	3.7	3.4	5.7	6.5	8.5	4.4	4.4	4.5	4.7	(*)	2.9
January 1985 to January 1986	5.3	4.5	5.0	3.2	2.7	6.0	4.8	(*)	3.7	3.3	4.8	4.3	(*)	2.4
January 1986 to February 1987														
13-month increase	5.0	5.5	5.3	2.6	3.1	4.6	5.7	(*)	2.6	2.6	5.3	5.4	(*)	3.5
Annual rate of increase	4.6	5.1	4.9	2.4	2.9	4.2	5.3	(*)	2.4	2.4	4.9	5.0	(*)	3.2
February 1987 to February 1988	4.2	3.3	4.8	2.6	2.1	3.7	3.0	(*)	2.7	2.0	4.6	3.6	(*)	2.1
February 1988 to February 1989	4.3	3.7	4.5	2.1	3.3	4.9	3.2	(*)	1.9	1.5	3.9	3.9	(*)	4.2

See footnotes at end of tables.

Table A-8. Pay relationships in establishments with paired office clerical occupations, Minneapolis-St. Paul, MN-WI, February 1989

Occupation for which earnings are compared	Occupation for which average earnings equal 100																								
	Secretaries					Stenographers	Typists		Word processors		Key entry operators		Accounting clerks				Payroll clerks	File clerks		Messengers	Order clerks		Receptionists	Switchboard operators	Switchboard operator-receptionists
	I	II	III	IV	V	I	I	II	I	II	I	II	I	II	III	IV		I	II		I	II			
Secretaries I	**100**	(*)	80	70	60	(*)	(*)	(*)	(*)	77	108	98	(*)	103	91	(*)	(*)	(*)	(*)	132	(*)	(*)	(*)	(*)	(*)
Secretaries II	(*)	**100**	85	74	62	(*)	139	(*)	125	97	127	103	128	117	97	88	106	149	118	147	(*)	90	114	104	116
Secretaries III	125	117	**100**	84	69	(*)	152	112	115	114	135	114	145	127	107	98	111	155	142	157	112	91	121	123	131
Secretaries IV	144	135	119	**100**	(*)	124	194	(*)	(*)	112	162	125	161	140	122	120	121	188	167	189	(*)	(*)	138	156	140
Secretaries V	167	161	145	(*)	**100**	(*)	(*)	(*)	(*)	(*)	176	147	189	159	139	127	140	250	190	231	195	(*)	(*)	161	181
Stenographers I	(*)	(*)	(*)	81	(*)	**100**	(*)	(*)	(*)	(*)	111	102	(*)	101	86	(*)	86	(*)	(*)	(*)	(*)	(*)	(*)	97	(*)
Typists I	(*)	72	66	52	(*)	(*)	**100**	80	95	73	(*)	79	(*)	89	69	(*)	74	104	(*)	115	(*)	(*)	103	76	(*)
Typists II	(*)	(*)	89	(*)	(*)	(*)	125	**100**	109	(*)	117	93	(*)	96	83	88	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	108
Word processors I	(*)	80	87	(*)	(*)	(*)	105	91	**100**	78	103	93	109	102	87	70	81	115	(*)	125	(*)	(*)	116	109	97
Word processors II	129	103	88	89	(*)	(*)	136	(*)	128	**100**	131	107	135	114	100	91	90	142	133	136	(*)	(*)	117	102	120
Key entry operators I	92	79	74	62	57	90	(*)	85	97	76	**100**	84	103	93	79	76	83	121	105	117	(*)	76	94	91	98
Key entry operators II	102	97	87	80	68	98	127	108	108	93	119	**100**	131	108	94	83	96	132	123	136	96	82	113	111	111
Accounting clerks I	(*)	78	69	62	53	(*)	(*)	(*)	91	74	97	76	**100**	87	72	69	80	112	106	(*)	(*)	(*)	100	74	91
Accounting clerks II	97	85	79	71	63	99	113	104	98	88	107	93	115	**100**	83	74	88	123	105	128	92	70	110	99	102
Accounting clerks III	110	103	94	82	72	116	145	120	115	100	127	106	139	120	**100**	85	103	149	128	152	106	99	113	111	117
Accounting clerks IV	(*)	114	102	84	79	(*)	(*)	114	144	110	132	120	145	134	117	**100**	116	166	131	147	(*)	(*)	123	121	134
Payroll clerks	(*)	94	90	83	71	117	135	(*)	123	111	121	104	126	114	97	87	**100**	140	125	146	(*)	106	125	111	120
File clerks I	(*)	67	65	53	40	(*)	96	(*)	87	70	83	76	89	82	67	60	71	**100**	(*)	100	(*)	(*)	(*)	87	87
File clerks II	(*)	85	70	60	53	(*)	(*)	(*)	(*)	75	95	81	95	95	78	77	80	(*)	**100**	112	(*)	(*)	(*)	81	98
Messengers	76	68	64	53	43	(*)	87	(*)	80	73	85	74	(*)	78	66	68	68	100	89	**100**	78	62	74	73	89
Order clerks I	(*)	(*)	89	(*)	51	(*)	(*)	(*)	(*)	(*)	(*)	104	(*)	109	94	(*)	(*)	(*)	(*)	128	**100**	84	94	(*)	111
Order clerks II	(*)	111	110	(*)	(*)	(*)	(*)	(*)	(*)	(*)	132	121	(*)	142	101	(*)	94	(*)	(*)	161	119	**100**	117	(*)	(*)
Receptionists	(*)	87	83	72	(*)	(*)	97	(*)	87	86	106	88	100	91	89	81	80	(*)	(*)	135	106	86	**100**	(*)	106
Switchboard operators	(*)	96	81	64	62	103	132	(*)	91	98	110	90	136	101	90	83	90	114	123	136	(*)	(*)	(*)	**100**	110
Switchboard operator-receptionists	(*)	86	77	72	55	(*)	(*)	93	103	84	102	90	110	98	85	74	83	115	102	113	90	(*)	95	91	**100**

NOTE: This matrix table shows the average (mean) relationship of earnings in establishments between any two occupations compared. Earnings for an occupation in the table stub are expressed as a percent of the earnings for an occupation in the column heading at the point where the data lines for the two intersect. For example, reading across the Secretaries III row, the 125 in the Secretaries I column indicates that Secretaries III average 125 percent of (or 25 percent more than) the earnings of Secretaries I.

See appendix A for method of computation.

Also see footnotes at end of tables.

Table A-9. Pay relationships in establishments with paired professional and technical occupations, Minneapolis-St. Paul, MN-WI, February 1989

Occupation for which earnings are compared	Occupation for which average earnings equal 100																	
	Computer systems analysts				Computer programmers				Computer operators				Drafters				Electronics technicians	Registered industrial nurses
	I	II	III	IV	I	II	III	IV	I	II	III	IV	II	III	IV	V	III	
Computer systems analysts I	**100**	86	75	65	141	119	100	(*)	204	162	137	124	172	142	113	104	97	95
Computer systems analysts II	116	**100**	87	74	158	137	118	(*)	228	186	159	138	190	165	133	117	106	111
Computer systems analysts III	132	115	**100**	86	179	156	133	(*)	259	219	183	163	224	189	154	135	128	133
Computer systems analysts IV	155	136	116	**100**	182	173	151	(*)	292	241	201	195	(*)	216	175	158	153	(*)
Computer programmers I	71	63	56	55	**100**	83	71	62	146	119	101	94	118	112	92	79	(*)	84
Computer programmers II	84	73	64	58	121	**100**	82	69	165	136	115	108	135	122	99	84	82	87
Computer programmers III	100	84	75	66	141	122	**100**	88	198	159	138	134	158	140	111	99	98	(*)
Computer programmers IV	(*)	(*)	(*)	(*)	160	144	113	**100**	277	222	185	(*)	(*)	164	130	(*)	(*)	(*)
Computer operators I	49	44	39	34	69	61	50	36	**100**	81	71	67	86	75	58	54	(*)	59
Computer operators II	62	54	46	42	84	74	63	45	124	**100**	84	76	99	90	71	64	54	66
Computer operators III	73	63	55	50	99	87	72	54	141	119	**100**	86	107	100	79	73	63	76
Computer operators IV	81	72	61	51	108	92	75	(*)	150	132	116	**100**	116	100	78	73	70	84
Drafters II	58	53	45	(*)	85	74	63	(*)	117	101	93	86	**100**	85	69	58	(*)	73
Drafters III	71	61	53	46	90	82	71	61	134	111	100	100	117	**100**	82	69	72	76
Drafters IV	89	75	65	57	108	101	90	77	171	140	126	128	145	123	**100**	84	91	97
Drafters V	96	85	74	63	127	119	101	(*)	184	155	137	137	172	146	119	**100**	99	101
Electronics technicians III	103	94	78	65	(*)	122	102	(*)	(*)	185	160	143	(*)	140	110	101	**100**	(*)
Registered industrial nurses	105	90	75	(*)	119	115	(*)	(*)	170	152	132	119	138	132	103	99	(*)	**100**

See table A-8 for description of these pay relationships and appendix A for method of computation.
Also see footnotes at end of tables.

Table A-10. Pay relationships in establishments with paired maintenance, toolroom, and powerplant occupations, Minneapolis-St. Paul, MN-WI, February 1989

Occupation for which earnings are compared	Occupation for which average earnings equal 100											
	Carpenters	Electricians	Painters	Machinists	Maintenance mechanics (machinery)	Pipefitters	Millwrights	Motor vehicle mechanics	Maintenance workers (general)	Trades helpers	Tool and die makers	Stationary engineers
Maintenance carpenters	**100**	93	103	97	98	92	(*)	115	(*)	163	(*)	108
Maintenance electricians	108	**100**	107	104	108	101	102	(*)	134	129	99	111
Maintenance painters	98	94	**100**	97	92	95	99	105	(*)	(*)	(*)	101
Maintenance machinists	103	96	103	**100**	102	(*)	(*)	101	108	(*)	97	104
Maintenance mechanics (machinery)	102	93	109	98	**100**	100	100	(*)	108	(*)	91	101
Maintenance pipefitters	109	99	106	(*)	100	**100**	(*)	(*)	(*)	(*)	(*)	107
Millwrights	(*)	98	101	(*)	100	(*)	**100**	(*)	(*)	(*)	(*)	(*)
Motor vehicle mechanics	87	(*)	95	99	(*)	(*)	(*)	**100**	111	(*)	(*)	101
General maintenance workers	(*)	75	(*)	93	92	(*)	(*)	90	**100**	(*)	78	81
Maintenance trades helpers	62	78	(*)	(*)	(*)	(*)	(*)	(*)	(*)	**100**	69	85
Tool and die makers	(*)	101	(*)	103	110	(*)	(*)	(*)	128	144	**100**	114
Stationary engineers	93	90	99	96	99	94	(*)	99	123	118	88	**100**

See table A-8 for description of these pay relationships and appendix A for method of computation.
Also see footnotes at end of tables.

Table A-11. Pay relationships in establishments with paired material movement and custodial occupations, Minneapolis-St. Paul, MN-WI, February 1989

Occupation for which earnings are compared	Occupation for which average earnings equal 100												
	Truckdrivers				Shippers	Receivers	Shippers and receivers	Warehouse-men	Order fillers	Shipping packers	Material handling laborers	Forklift operators	Janitors, porters, and cleaners
	Light truck	Medium truck	Heavy truck	Tractor-trailer									
Truckdrivers, light truck	**100**	(*)	(*)	(*)	(*)	(*)	148	104	(*)	(*)	108	(*)	155
Truckdrivers, medium truck	(*)	**100**	(*)	(*)	103	(*)	(*)	112	(*)	(*)	103	105	(*)
Truckdrivers, heavy truck	(*)	(*)	**100**	(*)	(*)	(*)	137	(*)	(*)	(*)	(*)	(*)	125
Truckdrivers, tractor-trailer	(*)	(*)	(*)	**100**	(*)	(*)	(*)	(*)	(*)	(*)	102	98	(*)
Shippers	(*)	98	(*)	(*)	**100**	99	108	104	105	106	106	101	109
Receivers	(*)	(*)	(*)	(*)	101	**100**	(*)	102	108	(*)	110	97	113
Shippers and receivers	68	(*)	75	(*)	92	(*)	**100**	106	(*)	(*)	98	102	118
Warehousemen	96	89	(*)	(*)	96	98	94	**100**	(*)	(*)	119	98	120
Order fillers	(*)	(*)	(*)	(*)	96	92	(*)	(*)	**100**	105	99	101	114
Shipping packers	(*)	(*)	(*)	(*)	94	(*)	(*)	(*)	95	**100**	98	89	106
Material handling laborers	93	97	(*)	98	94	91	102	84	101	102	**100**	95	113
Forklift operators	(*)	95	(*)	102	99	103	98	103	99	112	105	**100**	117
Janitors, porters, and cleaners	64	(*)	80	(*)	92	89	85	83	88	94	88	86	**100**

See table A-8 for description of these pay relationships and appendix A for method of computation.
Also see footnotes at end of tables.

Table A-12. Weekly earnings of office workers in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, February 1989

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																			
			Mean[2]	Median[3]	Middle range[3]	175 and under 200	200 – 225	225 – 250	250 – 275	275 – 300	300 – 325	325 – 350	350 – 375	375 – 400	400 – 425	425 – 450	450 – 475	475 – 500	500 – 525	525 – 550	550 – 575	575 – 600	600 – 650	650 – 700	700 – 750	750 and over
Secretarial and keyboarding occupations																									
Secretaries	5,090	39.5	402.00	389.50	346.00– 445.00	–	–	–	33	184	388	770	730	719	608	479	389	243	218	142	78	23	46	28	5	7
Manufacturing	3,207	39.5	402.50	391.00	350.50– 445.00	–	–	–	2	91	285	408	474	476	421	285	235	188	147	120	43	7	17	8	–	–
Nonmanufacturing	1,883	39.5	401.00	385.50	344.00– 445.50	–	–	–	31	93	103	362	256	243	187	194	154	55	71	22	35	16	29	20	5	7
Secretaries II	1,195	39.5	357.00	349.00	330.00– 384.50	–	–	–	30	82	114	381	235	168	86	70	22	1	–	1	5	–	–	–	–	–
Manufacturing	583	39.5	366.00	360.50	338.00– 392.50	–	–	–	1	13	67	142	146	102	65	29	16	1	–	1	–	–	–	–	–	–
Nonmanufacturing	612	39.0	348.50	345.00	327.00– 371.50	–	–	–	29	69	47	239	89	66	21	41	6	–	–	–	5	–	–	–	–	–
Secretaries III	1,830	39.5	390.00	384.50	355.50– 420.00	–	–	–	1	26	99	256	382	360	292	158	167	59	24	3	1	2	–	–	–	–
Manufacturing	960	39.5	384.50	380.50	356.00– 409.00	–	–	–	–	3	45	140	238	228	158	65	41	34	8	–	–	–	–	–	–	–
Nonmanufacturing	870	39.5	396.00	393.00	355.00– 438.50	–	–	–	1	23	54	116	144	132	134	93	126	25	16	3	1	2	–	–	–	–
Secretaries IV	1,032	40.0	446.50	433.00	401.50– 473.00	–	–	–	–	–	–	8	62	170	208	211	120	64	73	36	29	14	20	17	–	–
Nonmanufacturing	307	39.5	479.50	461.50	409.00– 528.50	–	–	–	–	–	–	5	19	41	24	54	17	21	47	17	20	10	19	13	–	–
Transportation and utilities	51	40.0	534.50	513.50	502.00– 547.00	–	–	–	–	–	–	–	–	–	–	–	1	10	22	6	3	2	3	4	–	–
Secretaries V:																										
Nonmanufacturing	81	40.0	557.00	554.00	467.50– 647.50	–	–	–	–	–	–	–	2	2	8	5	4	9	8	2	8	4	10	7	5	7
Transportation and utilities	25	40.0	587.50	583.00	557.50– 630.00	–	–	–	–	–	–	–	–	–	–	–	1	1	2	1	7	2	7	3	1	–
Stenographers	53	40.0	435.00	455.00	378.50– 499.00	–	–	–	–	1	3	8	–	5	–	4	18	1	6	7	–	–	–	–	–	–
Nonmanufacturing:																										
Transportation and utilities	48	40.0	447.00	455.00	404.00– 506.00	–	–	–	–	–	–	7	–	5	–	4	18	1	6	7	–	–	–	–	–	–
Stenographers I:																										
Nonmanufacturing:																										
Transportation and utilities	44	40.0	438.50	455.00	395.50– 455.00	–	–	–	–	–	–	7	–	5	–	4	18	1	6	3	–	–	–	–	–	–
Typists	148	39.0	279.00	262.00	221.00– 298.50	–	46	9	41	15	12	3	1	1	–	19	–	–	1	–	–	–	–	–	–	–
Nonmanufacturing	127	39.0	278.00	257.50	221.00– 292.50	–	46	5	35	12	6	2	1	–	–	19	–	–	1	–	–	–	–	–	–	–
Transportation and utilities	47	40.0	338.50	281.00	262.50– 434.50	–	–	–	22	5	–	–	–	–	–	19	–	–	1	–	–	–	–	–	–	–
Typists I	119	39.0	249.00	251.00	221.00– 266.50	–	46	9	41	13	7	2	–	1	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	102	39.0	245.00	247.00	221.00– 264.00	–	46	5	35	10	4	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Word processors	338	39.5	345.50	333.50	307.00– 381.00	–	7	1	7	53	63	69	44	33	22	21	13	3	2	–	–	–	–	–	–	–
Manufacturing	139	39.5	369.00	363.00	325.00– 411.00	–	–	1	6	7	20	20	23	18	16	14	11	3	–	–	–	–	–	–	–	–
Nonmanufacturing	199	40.0	329.00	326.00	298.00– 359.00	–	7	–	1	46	43	49	21	15	6	7	2	–	2	–	–	–	–	–	–	–
Word processors I	74	39.5	311.00	302.50	280.00– 343.00	–	7	1	7	20	14	8	7	5	1	3	1	–	–	–	–	–	–	–	–	–
Word processors II	264	39.5	355.00	341.00	316.00– 391.00	–	–	–	–	33	49	61	37	28	21	18	12	3	2	–	–	–	–	–	–	–
Manufacturing	101	39.5	385.50	380.50	348.50– 426.00	–	–	–	–	2	10	16	18	14	15	13	10	3	–	–	–	–	–	–	–	–
Nonmanufacturing	163	39.5	336.50	329.00	307.50– 362.00	–	–	–	–	31	39	45	19	14	6	5	2	–	2	–	–	–	–	–	–	–
Key entry operators	1,319	39.0	290.50	276.50	247.50– 320.00	1	43	370	237	178	197	131	55	28	26	19	3	2	28	1	–	–	–	–	–	–
Manufacturing	238	39.5	318.50	320.00	298.00– 345.00	–	–	40	4	18	72	55	21	8	7	9	3	1	–	–	–	–	–	–	–	–
Nonmanufacturing	1,081	39.0	284.50	262.50	247.50– 307.00	1	43	330	233	160	125	76	34	20	19	10	–	1	28	1	–	–	–	–	–	–
Key entry operators I	932	38.5	266.50	254.00	246.00– 286.00	1	43	364	209	132	114	52	10	4	2	–	–	1	–	–	–	–	–	–	–	–
Manufacturing	112	39.5	284.00	300.00	230.00– 320.00	–	–	40	4	9	43	9	6	1	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	820	38.5	264.00	251.50	246.00– 276.50	1	43	324	205	123	71	43	4	3	2	–	–	1	–	–	–	–	–	–	–	–
Key entry operators II	387	39.5	349.00	333.50	303.50– 378.00	–	–	6	28	46	83	79	45	24	24	19	3	1	28	1	–	–	–	–	–	–
Manufacturing	126	39.5	350.00	339.50	321.50– 367.00	–	–	–	–	9	29	46	15	7	7	9	3	1	–	–	–	–	–	–	–	–
Nonmanufacturing	261	39.5	348.50	326.50	297.50– 381.50	–	–	6	28	37	54	33	30	17	17	10	–	–	28	1	–	–	–	–	–	–
Other clerical occupations																										
Accounting clerks	3,541	39.5	337.50	326.50	285.00– 378.50	–	9	109	573	502	535	507	376	310	224	209	54	39	19	38	29	6	2	–	–	–
Manufacturing	1,539	39.5	358.50	354.50	316.00– 397.00	–	–	20	26	205	206	272	224	226	175	108	33	26	9	5	1	–	1	–	–	–
Nonmanufacturing	2,002	39.5	321.50	306.00	262.50– 349.50	–	9	89	547	297	329	235	152	92	49	101	21	13	10	33	28	6	1	–	–	–
Accounting clerks I:																										

See footnotes at end of tables.

Table A-12. Weekly earnings of office workers in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, February 1989 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[2]	Median[2]	Middle range[2]	175 and under 200	200 – 225	225 – 250	250 – 275	275 – 300	300 – 325	325 – 350	350 – 375	375 – 400	400 – 425	425 – 450	450 – 475	475 – 500	500 – 525	525 – 550	550 – 575	575 – 600	600 – 650	650 – 700	700 – 750	750 and over
Manufacturing	103	40.0	291.00	295.50	273.50– 295.50	–	–	12	15	58	12	2	–	–	2	2	–	–	–	–	–	–	–	–	–	–
Accounting clerks II	1,195	39.5	305.50	299.00	280.00– 329.00	–	–	63	186	357	257	166	113	24	14	3	3	9	–	–	–	–	–	–	–	–
Manufacturing	510	40.0	323.50	316.00	293.50– 340.50	–	–	8	10	136	133	114	70	16	12	2	1	8	–	–	–	–	–	–	–	–
Nonmanufacturing	685	39.5	292.50	282.50	265.00– 310.50	–	–	55	176	221	124	52	43	8	2	1	2	1	–	–	–	–	–	–	–	–
Accounting clerks III	1,177	39.0	359.50	349.50	323.00– 392.00	–	–	–	4	78	227	300	186	157	87	114	11	6	1	6	–	–	–	–	–	–
Manufacturing	513	39.5	366.50	363.50	332.50– 394.50	–	–	–	1	11	61	136	103	105	56	25	6	4	–	5	–	–	–	–	–	–
Nonmanufacturing	664	39.0	354.50	345.50	317.00– 384.50	–	–	–	3	67	166	164	83	52	31	89	5	2	1	1	–	–	–	–	–	–
Accounting clerks IV	629	39.5	421.00	408.50	377.50– 448.00	–	–	–	–	1	22	38	77	129	121	90	40	24	11	32	29	6	2	–	–	–
Manufacturing	413	39.5	409.50	406.00	381.00– 431.50	–	–	–	–	–	–	20	51	107	105	79	26	14	9	–	1	–	1	–	–	–
Nonmanufacturing	216	40.0	442.50	435.50	360.50– 541.50	–	–	–	–	1	22	18	26	22	16	11	14	10	9	32	28	6	1	–	–	–
Payroll clerks	300	39.5	366.50	353.00	294.50– 411.00	–	–	2	23	53	37	26	39	28	32	21	3	6	4	21	4	1	–	–	–	–
Manufacturing	104	40.0	389.50	387.50	341.50– 424.00	–	–	–	–	7	13	11	11	13	30	3	1	6	2	7	–	–	–	–	–	–
Nonmanufacturing	196	39.5	354.50	331.50	284.00– 388.00	–	–	2	23	46	24	15	28	15	2	18	2	–	2	14	4	1	–	–	–	–
File clerks	282	38.5	241.50	238.00	190.00– 257.50	75	32	95	23	22	24	3	3	1	–	–	–	1	3	–	–	–	–	–	–	–
Nonmanufacturing	265	38.5	238.50	236.00	190.00– 248.00	75	32	92	19	20	19	2	2	–	–	–	–	1	3	–	–	–	–	–	–	–
File clerks I	195	38.5	221.00	216.00	190.00– 246.00	75	27	69	13	8	2	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	191	38.5	220.00	216.00	190.00– 246.00	75	27	69	11	8	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–
File clerks II	73	39.0	280.00	258.00	239.50– 306.00	–	5	25	10	11	17	1	–	1	–	–	–	–	3	–	–	–	–	–	–	–
Nonmanufacturing	64	39.0	280.00	258.00	238.00– 306.00	–	5	22	8	10	15	1	–	–	–	–	–	–	3	–	–	–	–	–	–	–
Messengers	270	39.5	239.50	228.50	211.00– 253.50	14	114	72	36	16	9	1	–	4	–	–	2	2	–	–	–	–	–	–	–	–
Manufacturing	72	39.0	252.50	240.50	221.00– 264.00	1	19	25	12	4	6	1	–	4	–	–	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	198	39.5	235.00	222.00	211.00– 248.00	13	95	47	24	12	3	–	–	–	–	–	2	2	–	–	–	–	–	–	–	–
Order clerks	95	39.5	417.50	406.00	362.50– 464.50	–	1	2	–	1	7	6	12	8	13	12	12	2	9	3	–	–	2	–	–	–
Manufacturing	92	39.5	421.50	420.00	364.00– 466.50	–	–	2	–	1	6	6	12	7	13	12	12	2	9	8	–	–	2	–	–	–
Order clerks II	74	39.5	437.50	431.00	395.50– 467.00	–	–	–	–	–	–	2	10	8	13	12	11	2	8	6	–	–	2	–	–	–
Manufacturing	73	39.5	438.50	431.00	396.00– 467.00	–	–	–	–	–	–	2	10	7	13	12	11	2	8	6	–	–	2	–	–	–
Receptionists	154	40.0	311.00	300.00	289.00– 330.00	–	–	6	10	37	56	15	20	5	3	2	–	–	–	–	–	–	–	–	–	–
Manufacturing	57	40.0	326.50	328.00	293.50– 356.00	–	–	–	5	13	9	11	15	2	2	–	–	*	–	–	–	–	–	–	–	–
Nonmanufacturing	97	40.0	302.50	300.00	281.50– 300.00	–	–	6	5	24	47	4	5	3	1	2	–	–	–	–	–	–	–	–	–	–
Switchboard operators	129	39.5	340.00	317.50	294.50– 357.50	1	1	5	13	30	22	11	23	–	–	5	–	2	16	–	–	–	–	–	–	–
Manufacturing	59	39.5	316.50	308.00	295.50– 353.00	–	–	2	2	23	9	5	17	–	–	1	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	70	39.5	360.50	322.50	285.50– 489.50	1	1	3	11	7	13	6	6	–	–	4	–	2	16	–	–	–	–	–	–	–
Switchboard operator-receptionists	214	39.5	296.00	297.00	274.00– 314.00	5	–	10	41	56	69	19	7	2	3	1	–	1	–	–	–	–	–	–	–	–
Manufacturing	83	40.0	298.00	300.00	274.50– 314.00	–	–	7	15	18	33	5	1	–	3	–	–	1	–	–	–	–	–	–	–	–
Nonmanufacturing	131	39.5	294.50	296.50	274.00– 309.50	5	–	3	26	38	36	14	6	2	–	1	–	–	–	–	–	–	–	–	–	–

See footnotes at end of tables.

Table A-13. Weekly earnings of professional and technical workers in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, February 1989

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																					
			Mean[3]	Median[3]	Middle range[4]	250 and under 275	275 – 300	300 – 325	325 – 350	350 – 375	375 – 400	400 – 425	425 – 450	450 – 475	475 – 500	500 – 550	550 – 600	600 – 650	650 – 700	700 – 750	750 – 800	800 – 850	850 – 900	900 – 950	950 – 1000	1000 and over
Computer systems analysts	3,264	39.0	719.50	716.00	639.00- 787.00	–	–	–	–	–	–	–	1	6	16	117	324	441	560	665	407	336	196	106	58	31
Manufacturing	939	39.5	762.50	757.00	671.50- 853.00	–	–	–	–	–	–	–	1	1	6	8	85	97	117	141	125	116	110	59	48	25
Nonmanufacturing	2,325	39.0	702.00	704.00	633.00- 757.50	–	–	–	–	–	–	–	–	5	10	109	239	344	443	524	282	220	86	47	10	6
Computer systems analysts I	930	38.5	615.00	611.50	573.50- 653.00	–	–	–	–	–	–	–	1	6	15	108	280	266	169	79	6	–	–	–	–	–
Manufacturing	170	40.0	601.50	595.00	565.50- 639.50	–	–	–	–	–	–	–	1	1	6	7	78	48	24	4	1	–	–	–	–	–
Nonmanufacturing	760	38.5	617.50	614.50	576.00- 656.00	–	–	–	–	–	–	–	–	5	9	101	202	218	145	75	5	–	–	–	–	–
Computer systems analysts II	1,199	39.0	704.50	703.00	663.50- 737.50	–	–	–	–	–	–	–	–	–	1	9	44	169	371	357	158	61	21	7	1	–
Manufacturing	326	39.5	715.50	712.00	670.50- 760.50	–	–	–	–	–	–	–	–	–	–	1	7	49	84	90	63	24	8	–	–	–
Nonmanufacturing	873	39.0	700.50	692.50	659.00- 737.50	–	–	–	–	–	–	–	–	–	1	8	37	120	287	267	95	37	13	7	1	–
Transportation and utilities	125	40.0	790.00	779.00	749.00- 835.50	–	–	–	–	–	–	–	–	–	–	–	–	–	10	22	42	31	12	7	1	–
Computer systems analysts III	969	39.0	802.50	797.00	746.00- 843.00	–	–	–	–	–	–	–	–	–	–	–	–	6	18	229	237	260	135	61	18	5
Manufacturing	308	39.5	827.50	829.00	772.50- 880.00	–	–	–	–	–	–	–	–	–	–	–	–	–	7	47	56	83	66	31	15	3
Nonmanufacturing	661	39.0	791.00	787.00	743.00- 827.00	–	–	–	–	–	–	–	–	–	–	–	–	6	11	182	181	177	69	30	3	2
Computer systems analysts IV	166	40.0	927.50	924.50	876.00- 971.00	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	8	15	40	38	39	* 26
Computer programmers	1,886	39.0	544.00	533.50	480.00- 602.50	–	–	–	–	7	16	178	54	176	188	396	391	253	144	58	14	9	2	–	–	–
Manufacturing	515	40.0	598.50	610.50	533.50- 659.50	–	–	–	–	–	1	17	7	21	27	75	92	127	92	41	12	2	1	–	–	–
Nonmanufacturing	1,371	38.5	523.50	516.50	461.00- 570.00	–	–	–	–	7	15	161	47	155	161	321	299	126	52	17	2	7	1	–	–	–
Computer programmers I	372	39.0	458.50	447.50	418.50- 484.50	–	–	–	–	2	3	155	28	77	30	50	25	2	–	–	–	–	–	–	–	–
Manufacturing	57	40.0	468.50	459.50	422.50- 508.00	–	–	–	–	–	1	15	7	10	4	18	1	1	–	–	–	–	–	–	–	–
Nonmanufacturing	315	38.5	456.50	444.50	418.50- 480.00	–	–	–	–	2	2	140	21	67	26	32	24	1	–	–	–	–	–	–	–	–
Computer programmers II	819	38.5	518.50	514.50	488.50- 557.00	–	–	–	–	5	13	23	22	84	143	285	189	47	4	4	–	–	–	–	–	–
Manufacturing	105	39.5	527.00	519.50	496.00- 548.50	–	–	–	–	–	–	2	–	6	21	51	19	4	2	–	–	–	–	–	–	–
Nonmanufacturing	714	38.5	517.00	514.50	484.50- 557.00	–	–	–	–	5	13	21	22	78	122	234	170	43	2	4	–	–	–	–	–	–
Computer programmers III	588	39.5	604.00	605.00	565.50- 643.50	–	–	–	–	–	–	–	4	15	15	61	177	194	95	19	2	4	2	–	–	–
Manufacturing	288	40.0	624.50	625.00	589.00- 659.00	–	–	–	–	–	–	–	–	5	2	6	72	115	73	14	–	–	1	–	–	–
Nonmanufacturing	300	39.0	584.50	584.50	542.50- 620.00	–	–	–	–	–	–	–	4	10	13	55	105	79	22	5	2	4	1	–	–	–
Computer programmers IV	107	40.0	706.50	698.00	681.00- 725.00	–	–	–	–	–	–	–	–	–	–	–	–	10	45	35	12	5	–	–	–	–
Computer operators	1,029	39.5	413.00	396.50	362.00- 457.00	8	24	52	106	158	189	138	81	72	53	83	38	23	2	–	1	1	–	–	–	–
Manufacturing	586	39.5	402.50	397.00	360.00- 435.50	3	16	32	64	84	112	98	50	53	22	44	7	–	1	–	–	–	–	–	–	–
Nonmanufacturing	443	39.5	427.50	395.00	364.50- 490.00	5	8	20	42	74	77	40	31	19	31	39	31	23	1	–	1	1	–	–	–	–
Transportation and utilities	85	40.0	524.50	562.50	467.00- 576.00	–	–	–	–	14	4	2	1	3	3	13	27	18	–	–	–	–	–	–	–	–
Computer operators II	480	39.5	376.00	371.50	346.50- 394.50	2	11	36	78	128	113	62	20	13	6	11	–	–	–	–	–	–	–	–	–	–
Manufacturing	266	39.5	378.50	373.50	346.00- 403.00	1	10	22	44	63	50	40	11	9	6	10	–	–	–	–	–	–	–	–	–	–
Nonmanufacturing	214	39.5	373.00	370.00	356.00- 389.00	1	1	14	34	65	63	22	9	4	–	1	–	–	–	–	–	–	–	–	–	–
Computer operators III	346	39.5	443.50	429.50	397.00- 490.00	–	–	2	18	17	64	58	48	34	33	38	30	2	2	–	–	–	–	–	–	–
Manufacturing	209	39.5	423.50	410.50	390.00- 459.50	–	–	1	15	13	54	40	26	24	9	23	3	–	1	–	–	–	–	–	–	–
Nonmanufacturing	137	39.5	475.00	475.50	425.00- 532.00	–	–	1	3	4	10	18	22	10	24	15	27	2	1	–	–	–	–	–	–	–
Computer operators IV	125	39.5	480.00	474.00	434.00- 509.00	–	–	–	–	1	7	18	13	25	14	34	8	3	–	–	1	1	–	–	–	–
Drafters	800	40.0	534.00	534.50	455.50- 604.50	–	–	2	11	16	46	52	63	55	68	152	125	102	57	38	10	3	–	–	–	–
Manufacturing	716	40.0	533.50	533.00	454.50- 601.50	–	–	2	11	13	44	47	54	49	61	137	117	81	51	36	10	3	–	–	–	–
Drafters III	158	40.0	430.00	427.50	403.00- 461.50	–	–	–	4	8	23	37	35	29	16	6	–	–	–	–	–	–	–	–	–	–
Manufacturing	144	40.0	430.00	429.00	403.50- 462.00	–	–	–	4	6	22	33	32	28	16	3	–	–	–	–	–	–	–	–	–	–

See footnotes at end of tables.

Table A-13. Weekly earnings of professional and technical workers in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, February 1989 —Continued

Occupation and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings (in dollars)[2]			Number of workers receiving straight-time weekly earnings (in dollars) of —																				
			Mean[3]	Median[3]	Middle range[3]	250 and under 275	275 – 300	300 – 325	325 – 350	350 – 375	375 – 400	400 – 425	425 – 450	450 – 475	475 – 500	500 – 550	550 – 600	600 – 650	650 – 700	700 – 750	750 – 800	800 – 850	850 – 900	900 – 950	950 – 1000	1000 and over
Drafters IV	308	40.0	535.50	534.50	484.00– 570.50	–	–	–	–	–	12	5	26	21	35	101	60	19	12	14	3	–	–	–	–	–
Manufacturing	273	40.0	540.50	538.00	490.00– 574.00	–	–	–	–	–	12	4	20	16	28	89	58	17	12	14	3	–	–	–	–	–
Drafters V	294	40.0	609.00	610.00	555.00– 659.00	–	–	–	–	–	–	–	–	5	17	45	65	83	45	24	7	3	–	–	–	–
Manufacturing	261	40.0	606.00	604.50	548.50– 659.50	–	–	–	–	–	–	–	–	5	17	45	59	64	39	22	7	3	–	–	–	–
Electronics technicians	1,675	40.0	555.50	544.00	472.00– 639.00	–	–	–	1	11	44	87	128	160	149	281	258	183	217	120	33	3	–	–	–	–
Manufacturing	1,635	40.0	552.00	542.00	470.00– 629.00	–	–	–	1	11	44	87	128	160	149	281	258	179	184	117	33	3	–	–	–	–
Electronics technicians I: Manufacturing	150	40.0	424.50	421.50	401.50– 450.00	–	–	–	1	10	24	44	33	26	3	9	–	–	–	–	–	–	–	–	–	–
Electronics technicians III	729	40.0	636.50	642.00	579.50– 692.00	–	–	–	–	–	–	–	–	1	19	78	131	165	183	116	33	3	–	–	–	–
Manufacturing	725	40.0	636.50	641.50	578.00– 692.50	–	–	–	–	–	–	–	–	1	19	78	131	161	183	116	33	3	–	–	–	–
Registered industrial nurses	63	40.0	586.00	570.50	549.00– 633.00	–	–	–	–	–	–	–	–	–	2	22	14	17	6	1	1	–	–	–	–	–

[1] Workers were distributed as follows: 14 at $1,000 to $1,050; 9 at $1,050 to $1,100; and 3 at $1,150 to $1,200.
Also see footnotes at end of tables.

Table A-14. Average weekly earnings of office, professional, and technical workers, by sex in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, February 1989

Sex,[4] occupation, and industry division	Number of workers	Average (mean[5])	
		Weekly hours[1] (standard)	Weekly earnings (in dollars)[2]
Office occupations - men			
Messengers	73	39.5	239.50
Nonmanufacturing	64	39.5	234.00
Office occupations - women			
Secretaries:			
Nonmanufacturing	1,701	39.5	399.00
Secretaries II:			
Nonmanufacturing	599	39.0	349.00
Secretaries III	1,603	40.0	388.00
Manufacturing	808	40.0	378.50
Nonmanufacturing	795	39.5	398.00
Secretaries IV	906	40.0	444.00
Stenographers:			
Nonmanufacturing:			
Transportation and utilities	43	40.0	436.50
Stenographers I:			
Nonmanufacturing:			
Transportation and utilities	43	40.0	436.50
Typists	138	39.0	276.50
Nonmanufacturing	120	39.0	275.50
Typists I	112	38.5	247.00
Nonmanufacturing	98	39.0	243.00
Word processors	333	39.5	345.00
Manufacturing	137	39.5	368.50
Nonmanufacturing	196	40.0	328.00
Word processors I	72	39.5	308.00
Word processors II	261	39.5	355.00
Manufacturing	99	39.5	385.00
Nonmanufacturing	162	39.5	336.50
Key entry operators	1,221	39.0	284.50
Manufacturing	203	39.5	316.50
Nonmanufacturing	1,018	38.5	278.00
Key entry operators I	885	38.5	264.50
Manufacturing	90	39.5	275.00
Nonmanufacturing	795	38.5	263.00
Key entry operators II	336	39.5	337.50
Manufacturing	113	39.5	350.00
Nonmanufacturing	223	39.5	331.50
Accounting clerks:			
Nonmanufacturing	1,458	39.5	310.50
Accounting clerks I:			
Manufacturing	86	40.0	291.50
Accounting clerks II	1,028	39.5	304.50
Manufacturing	409	40.0	323.50
Nonmanufacturing	619	39.5	292.00
Accounting clerks III:			
Nonmanufacturing	354	39.5	373.00
Payroll clerks	262	39.5	360.50
Manufacturing	89	40.0	402.00
Nonmanufacturing	173	39.5	339.50
File clerks	155	39.0	253.50
Nonmanufacturing	139	39.0	249.50
File clerks I	90	39.5	234.50
Nonmanufacturing	86	39.5	232.50
File clerks II	54	39.0	268.50
Messengers	188	39.0	237.00
Manufacturing	60	39.0	251.00
Nonmanufacturing	128	39.5	230.00
Order clerks	92	39.5	417.00
Manufacturing	89	39.5	421.00
Order clerks II	71	39.5	438.00
Manufacturing	70	39.5	438.50
Receptionists	133	40.0	309.50
Manufacturing	51	40.0	327.00
Nonmanufacturing	82	40.0	298.50
Switchboard operator-receptionists	212	39.5	295.50
Manufacturing	83	40.0	298.00
Nonmanufacturing	129	39.5	294.00
Professional and technical occupations - men			
Computer systems analysts:			
Computer systems analysts III:			
Nonmanufacturing	411	38.5	787.00
Computer programmers:			
Computer programmers IV	75	40.0	708.00
Computer operators:			
Computer operators II:			
Nonmanufacturing	95	39.5	387.00
Computer operators III:			
Manufacturing	122	40.0	422.00
Electronics technicians:			
Electronics technicians III	594	40.0	634.00
Manufacturing	590	40.0	634.00
Professional and technical occupations - women			
Computer operators:			
Computer operators II:			
Nonmanufacturing	104	39.5	376.00

See footnotes at end of tables.

Table A-15. Hourly earnings of maintenance, toolroom, and powerplant workers in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, February 1989

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[1]			Number of workers receiving straight-time hourly earnings (in dollars) of —																					
		Mean[2]	Median[2]	Middle range[2]	Under 7.00	7.00 and under 7.50	7.50 – 8.00	8.00 – 8.50	8.50 – 9.00	9.00 – 9.50	9.50 – 10.00	10.00 – 10.50	10.50 – 11.00	11.00 – 11.50	11.50 – 12.00	12.00 – 12.50	12.50 – 13.00	13.00 – 13.50	13.50 – 14.00	14.00 – 14.50	14.50 – 15.00	15.00 – 16.00	16.00 – 17.00	17.00 – 18.00	18.00 – 19.00	19.00 – 20.00	20.00 – 21.00
Maintenance carpenters	102	15.52	16.16	14.38–16.16	–	–	–	–	–	–	–	–	1	2	1	–	2	6	8	6	–	24	46	4	–	2	–
Manufacturing	67	15.23	15.72	14.26–16.16	–	–	–	–	–	–	–	–	1	2	1	–	–	–	8	6		21	28	–	–	–	–
Maintenance electricians	544	15.60	15.28	14.44–16.45	–	–	–	–	–	–	–	–	–	–	1	–	2	7	2	226	4	85	166	18	29	4	–
Manufacturing	526	15.49	15.15	14.44–16.45	–	–	–	–	–	–	–	–	–	–	1	–	2	7	2	226	4	85	165	17	17	–	–
Maintenance painters	70	15.71	16.27	16.16–16.27	–	–	–	–	–	–	–	1	–	–	–	–	2	9	2	2	–	–	51	–	1	2	–
Manufacturing	59	15.43	16.27	14.13–16.27	–	–	–	–	–	–	–	1	–	–	–	–	2	9	2	2	–	–	43	–	–	–	–
Maintenance machinists	460	15.78	16.37	15.27–16.37	–	–	–	–	–	–	–	–	–	–	–	–	14	3	66	–	21	99	231	–	11	–	15
Manufacturing	449	15.71	16.37	15.22–16.37	–	–	–	–	–	–	–	–	–	–	–	–	14	3	56	–	21	99	231	–	–	–	15
Maintenance mechanics (machinery)	903	14.32	13.71	13.71–15.15	–	–	–	–	–	–	–	–	–	–	1	33	24	5	484	64	15	213	54	–	–	10	–
Manufacturing	881	14.24	13.71	13.71–15.15	–	–	–	–	–	–	–	–	–	–	1	31	24	5	484	64	15	213	44	–	–	–	–
Maintenance pipefitters	204	15.78	15.15	15.15–16.72	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6	4	118	71	–	–	1	4
Manufacturing	199	15.68	15.15	15.15–16.72	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6	4	118	71	–	–	–	–
Millwrights	172	16.04	16.16	16.16–16.32	–	–	–	–	–	–	–	–	–	–	–	–	4	2	2	–	1	11	152	–	–	–	–
Manufacturing	172	16.04	16.16	16.16–16.32	–	–	–	–	–	–	–	–	–	–	–	–	4	2	2	–	1	11	152	–	–	–	–
Motor vehicle mechanics	312	13.97	14.52	11.00–16.44	–	–	–	–	6	36	7	–	15	23	13	11	1	6	25	4	18	42	48	51	–	6	–
Manufacturing	63	14.65	13.86	13.86–15.47	–	–	–	–	–	–	–	–	–	–	1	11	1	–	23	4	–	9	8	–	–	6	–
Nonmanufacturing	249	13.80	14.90	10.50–16.44	–	–	–	–	6	36	7	–	15	23	12	–	–	6	2	–	18	33	40	51	–	–	–
Transportation and utilities	225	13.71	14.52	10.50–16.44	–	–	–	–	6	36	6	–	15	21	12	–	–	4	1	–	14	19	40	51	–	–	–
General maintenance workers	265	11.47	11.60	9.00–13.00	9	6	1	30	7	17	2	19	13	19	34	29	5	13	14	–	2	39	–	6	–	–	–
Manufacturing	170	11.98	12.10	10.64–13.95	–	–	–	24	1	12	–	2	6	14	23	24	4	13	14	–	2	31	–	–	–	–	–
Nonmanufacturing	95	10.57	10.25	8.50–11.73	9	6	1	6	6	5	2	17	7	5	11	5	1	–	–	–	–	8	–	6	–	–	–
Maintenance trades helpers	66	10.61	11.01	7.50–13.25	–	–	24	–	–	1	3	–	4	3	1	3	–	27	–	–	–	–	–	–	–	–	–
Manufacturing	58	10.54	11.01	7.50–13.25	–	–	24	–	–	–	–	–	4	3	1	–	–	26	–	–	–	–	–	–	–	–	–
Tool and die makers	372	16.53	17.02	15.91–17.02	–	–	–	–	–	–	–	–	–	2	–	2	–	2	–	1	18	92	16	229	10	–	–
Manufacturing	349	16.46	17.02	15.90–17.02	–	–	–	–	–	–	–	–	–	2	–	2	–	2	–	1	18	92	16	215	1	–	–
Stationary engineers	142	15.11	14.57	14.14–16.28	–	–	–	–	–	–	–	–	–	–	2	–	1	19	2	44	12	21	23	5	1	12	–
Manufacturing	60	14.89	14.98	14.14–16.28	–	–	–	–	–	–	–	–	–	–	2	–	1	6	–	17	4	11	19	–	–	–	–
Nonmanufacturing	82	15.28	14.45	14.22–16.58	–	–	–	–	–	–	–	–	–	–	–	–	–	13	2	27	8	10	4	5	1	12	–

See footnotes at end of tables.

Table A-16. Hourly earnings of material movement and custodial workers in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, February 1989

Occupation and industry division	Number of workers	Hourly earnings (in dollars)[1]			Number of workers receiving straight-time hourly earnings (in dollars) of —																							
		Mean[2]	Median[3]	Middle range[3]	3.85 and under 4.00	4.00 – 4.50	4.50 – 5.00	5.00 – 5.50	5.50 – 6.00	6.00 – 6.50	6.50 – 7.00	7.00 – 7.50	7.50 – 8.00	8.00 – 8.50	8.50 – 9.00	9.00 – 9.50	9.50 – 10.00	10.00 – 11.00	11.00 – 12.00	12.00 – 13.00	13.00 – 14.00	14.00 – 15.00	15.00 – 16.00	16.00 – 17.00	17.00 – 18.00	18.00 – 19.00	19.00 – 20.00
Truckdrivers	1,614	14.58	15.74	12.10–15.74	–	–	–	–	–	–	1	3	–	8	–	4	11	192	179	65	60	77	873	–	–	–	141
Manufacturing	533	13.70	11.82	11.17–19.53	–	–	–	–	–	–	–	–	–	2	–	–	8	123	179	48	27	5	–	–	–	–	141
Truckdrivers, light truck	271	15.29	19.53	10.15–19.53	–	–	–	–	–	–	–	–	–	8	–	3	11	70	10	12	16	–	–	–	–	–	141
Truckdrivers, tractor-trailer	299	15.09	15.99	15.12–15.99	–	–	–	–	–	–	–	–	–	–	–	–	–	7	–	29	21	11	231	–	–	–	–
Shippers	109	12.06	13.74	9.13–13.74	–	–	–	–	–	–	–	–	6	2	5	20	1	2	7	3	55	–	8	–	–	–	–
Manufacturing	90	11.90	13.74	9.13–13.74	–	–	–	–	–	–	–	–	6	2	2	20	1	2	2	1	54	–	–	–	–	–	–
Receivers	97	11.45	11.92	9.23–13.74	–		2	1	2	1	–	4	3	3	4	6	1	2	21	12	31	4	–	–	–	–	–
Nonmanufacturing	52	11.46	13.58	8.97–13.89	–	–	2	1	2	1	–	2	3	1	3	1	1	–	5	1	25	4	–	–	–	–	–
Shippers and receivers	247	9.40	9.03	6.10–13.19	–	–	–	–	54	21	12	24	5	1	2	23	2	19	20	1	36	–	27	–	–	–	–
Nonmanufacturing	106	10.74	10.92	9.03–15.02	–	–	–	–	6	9	–	–	5	–	2	23	–	16	17	1	–	–	27	–	–	–	–
Warehousemen	988	11.99	11.85	10.42–14.25	–	–	–	–	–	–	–	3	35	23	9	13	10	328	130	110	76	79	172	–	–	–	–
Manufacturing	334	11.40	11.85	10.17–12.09	–	–	–	–	–	–	–	–	4	2	6	8	8	110	78	82	21	12	3	–	–	–	–
Nonmanufacturing	654	12.29	11.23	10.48–15.02	–	–	–	–	–	–	–	3	31	21	3	5	2	218	52	28	55	67	169	–	–	–	–
Order fillers	580	12.53	12.11	10.92–16.10	–	–	–	–	–	–	3	6	9	5	35	–	11	112	10	237	5	–	–	147	–	–	–
Manufacturing	384	11.56	12.11	10.92–12.55	–	–	–	–	–	–	–	–	–	2	35	–	4	97	5	237	4	–	–	–	–	–	–
Shipping packers	256	10.83	11.05	10.32–11.05	–	–	–	–	–	–	–	–	2	10	20	–	–	54	130	40	–	–	–	–	–	–	–
Manufacturing	256	10.83	11.05	10.32–11.05	–	–	–	–	–	–	–	–	2	10	20	–	–	54	130	40	–	–	–	–	–	–	–
Material handling laborers	621	11.62	11.14	10.51–12.04	–	–	2	1	13	1	1	1	–	2	40	17	22	204	120	66	6	6	104	–	–	–	15
Manufacturing	486	10.90	10.85	10.39–11.35	–	–	–	–	12	–	–	–	–	2	40	16	22	203	120	56	–	–	–	–	–	–	15
Forklift operators	572	12.32	12.12	11.35–12.83	–	–	2	1	–	–	–	–	–	–	10	–	–	45	161	252	65	4	32	–	–	–	–
Manufacturing	505	12.08	12.11	11.35–12.83	–	–	–	–	–	–	–	–	–	–	10	–	–	45	161	252	37	–	–	–	–	–	–
Guards	3,789	6.21	5.30	5.00– 6.25	10	357	394	1217	676	300	147	38	18	47	25	24	10	166	239	61	34	25	1	–	–	–	–
Manufacturing	477	11.04	11.06	10.81–11.88	–	–	–	–	–	–	12	–	5	11	3	21	7	149	175	61	29	3	1	–	–	–	–
Nonmanufacturing	3,312	5.52	5.25	5.00– 5.75	10	357	394	1217	676	300	135	38	13	36	22	3	3	17	64	–	5	22	–	–	–	–	–
Guards I:																											
Manufacturing	446	10.98	11.06	10.81–11.08	–	–	–	–	–	–	12	–	5	11	3	21	7	141	175	38	29	3	1	–	–	–	–
Janitors, porters, and cleaners	4,638	6.83	5.55	5.30– 7.79	–	10	276	2001	319	448	242	79	167	97	66	59	57	416	248	89	64	–	–	–	–	–	–
Manufacturing	1,074	10.04	10.32	9.00–11.21	–	–	–	–	4	9	55	39	48	55	57	48	53	397	226	54	29	–	–	–	–	–	–
Nonmanufacturing	3,564	5.87	5.45	5.15– 6.15	–	10	276	2001	315	439	187	40	119	42	9	11	4	19	22	35	35	–	–	–	–	–	–
Transportation and utilities	122	12.00	12.63	11.09–13.65	–	–	–	–	–	–	–	–	–	–	–	7	4	19	22	35	35	–	–	–	–	–	–

See footnotes at end of tables.

Table A-17. Average hourly earnings of maintenance, toolroom, powerplant, material movement and custodial workers by sex in establishments employing 500 workers or more in Minneapolis-St. Paul, MN-WI, February 1989

Sex,[1] occupation, and industry division	Number of workers	Average (mean[2]) hourly earnings (in dollars)[2]
Maintenance, toolroom, and powerplant occupations - men		
Maintenance carpenters	92	15.77
Manufacturing	65	15.27
Maintenance electricians	533	15.59
Manufacturing	516	15.48
Maintenance painters	68	15.70
Manufacturing	57	15.40
Maintenance machinists	453	15.78
Manufacturing	442	15.71
Maintenance mechanics (machinery)	887	14.29
Manufacturing	875	14.24
Maintenance pipefitters	204	15.78
Manufacturing	199	15.68
Millwrights	171	16.04
Manufacturing	171	16.04
Motor vehicle mechanics	271	13.62
Manufacturing	63	14.65
Nonmanufacturing	208	13.31
General maintenance workers	246	11.36
Manufacturing	155	11.81
Nonmanufacturing	91	10.58
Maintenance trades helpers	61	10.54
Manufacturing	54	10.43
Tool and die makers	340	16.63
Manufacturing	317	16.56
Stationary engineers	137	15.05
Manufacturing	60	14.89
Nonmanufacturing	77	15.17
Material movement and custodial occupations - men		
Truckdrivers:		
Manufacturing	525	13.72
Truckdrivers, light truck	266	15.35
Shippers	83	12.02
Manufacturing	70	11.78
Receivers	79	11.62
Nonmanufacturing	51	11.46
Shippers and receivers	168	10.44
Manufacturing	69	9.71
Nonmanufacturing	99	10.94
Warehousemen	910	12.07
Manufacturing	285	11.56
Nonmanufacturing	625	12.30
Order fillers	445	12.90
Manufacturing	278	11.89
Material handling laborers	488	11.96
Manufacturing	354	11.10
Forklift operators	526	12.35
Manufacturing	459	12.09
Guards:		
Manufacturing	410	11.03
Guards I:		
Manufacturing	383	10.96
Janitors, porters, and cleaners:		
Manufacturing	753	9.96
Material movement and custodial occupations - women		
Order fillers	135	11.32
Guards:		
Manufacturing	67	11.15
Guards I:		
Manufacturing	63	11.07

See footnotes at end of tables.

Footnotes

Some of these standard footnotes may not apply to this bulletin.

[1] Standard hours reflect the workweek for which employees receive their regular straight-time salaries (exclusive of pay for overtime at regular and/or premium rates), and the earnings correspond to these weekly hours.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts. Also excluded are performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries, as well as profit-sharing payments, attendance bonuses, Christmas or year-end bonuses, and other nonproduction bonuses. Pay increases—but not bonuses—under cost-of-living allowance clauses, and incentive payments, however, are included.

[3] The mean is computed for each job by totaling the earnings of all workers and dividing by the number of workers. The median designates position—one-half of the workers receive the same as or more and one-half receive the same as or less than the rate shown. The middle range is defined by two rates of pay; one-fourth of the workers earn the same as or less than the lower of these rates and one-fourth earn the same as or more than the higher rate.

[4] Earnings data relate only to workers whose sex identification was provided by the establishment.

[5] Estimates for periods ending prior to 1976 relate to men only for skilled maintenance and unskilled plant workers. All other estimates relate to men and women.

[6] Data do not meet publication criteria or data not available.

Appendix A. Scope and Method of Survey

In January 1987, the Bureau began to phase in a new 90-area program to replace the 70-area program that had produced annual surveys since July 1974. When the new plan is fully implemented in 1990, 32 of the areas will be surveyed annually, and two groups of 29 areas will be surveyed in alternate years. (For a full discussion of the change, see Laura Scofea, "BLS Area Wage Surveys Will Cover More Areas," *Monthly Labor Review*, June 1986, pp. 19-23.)

In each area surveyed,[1] the Bureau obtains wages and related benefits data from representative establishments within six broad industry divisions: Manufacturing; transportation, communication, and other public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services. Government operations and the construction and extractive industries are excluded. Small establishments—generally those with fewer than 50 employees—are excluded because they have few incumbents in the occupations studied. Appendix table 1 shows the number of establishments and workers estimated to be within the scope of this survey, as well as the number actually studied.

In the 32 areas surveyed annually, Bureau field representatives obtain data by personal visits at 4-year intervals. In intervening years, only information on employment and occupational earnings is collected by a combination of personal visit, mail questionnaire, and telephone interview from establishments participating in the previous survey.

In the two groups of 29 areas that are surveyed in alternate years, Bureau field representatives obtain data for a given area by personal visits if the previous data for the area were obtained primarily by mail and telephone. Thus, in a 4-year period, an area that was surveyed by personal visit the first year will have no survey in the second, a mail and telephone survey in the third, and none in the fourth. As with annual surveys, information on establishment practices and employee benefits is presented only for surveys conducted by personal visits; when information is collected primarily by mail and telephone, only information on employment and earnings is presented.

A sample of the establishments in the scope of the survey is selected for study prior to each personal visit survey. This sample, minus establishments which go out of business or are no longer within the industrial scope of the survey, is retained until the next personal visit survey is conducted. In most cases, establishments new to the area are not considered in the scope of the survey until the selection of a sample for a personal visit survey.

The sampling procedures involve detailed stratification by industry and number of employees of all establishments within the scope of a survey. From this stratified universe, a probability sample is selected, with each establishment having a predetermined chance of selection. To obtain optimum accuracy at minimum cost, a greater proportion of large than small establishments is selected. When data are combined, each establishment is weighted according to its probability of selection so that unbiased estimates are generated. For example, if one out of four establishments is selected, it is given a weight of 4 to represent itself plus three others. If data are not available for an establishment originally selected, the weights of other similar establishments are increased to account for the missing unit.

Occupations and earnings

Occupations selected for study are common to a variety of manufacturing and nonmanufacturing industries, and are of the following types: (1) Office clerical; (2) professional and technical; (3) maintenance, toolroom, and powerplant; and (4) material movement and custodial. Occupational classification is based on a uniform set of job descriptions designed to take account of interestablishment variation in duties within the same job. Occupations selected for study are listed and described in appendix B, along with corresponding occupational codes and titles from the 1980 edition of the *Standard Occupational Classification Manual*.

Unless otherwise indicated, the earnings data following the job titles are for all industries combined. Earnings data for some of the occupations listed and described, or for some industry divisions within the scope of the survey, are not presented in the A-series tables because either (1) data were insufficient to provide meaningful statistical results, or (2) there is a possibility of disclosure of individual establishment data. Earnings data not shown separately for industry divisions are included in data for all industries combined.

Separate data for men's and women's earnings or earnings by occupational level are not presented when a significant number of workers are not identified by sex or level. In such cases, workers are only included for both sexes combined or for the overall level.

Occupational employment and earnings data are shown for full-time workers, i.e., those hired to work a regular weekly schedule. Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Also excluded are performance bonuses and lump-sum payments of the type negotiated in the auto and

aerospace industries, as well as profit-sharing payments, attendance bonuses, Christmas or year-end bonuses, and other nonproduction bonuses. Pay increases—but not bonuses—under cost-of-living allowance clauses, and incentive payments, however, are included. Weekly hours for office clerical and professional and technical occupations refer to the standard workweek (rounded to the nearest half hour) for which employees receive regular straight-time salaries (exclusive of pay for overtime at regular and/or premium rates). Average weekly earnings for these occupations are rounded to the nearest half dollar. Some A-series tables provide distributions of workers by earnings; changes in the size of earnings intervals are indicated by heavy vertical lines.

These surveys measure the level of occupational earnings in an area at a particular time. Changes in an occupational average over time reflect, in addition to earnings changes, factors such as changes in proportions of workers employed by high- or low-wage firms, or high-wage workers advancing to better jobs and being replaced by new workers at lower rates. Such shifts in employment could decrease an occupational average even though most establishments in an area increased wages since the last survey. Changes in earnings of occupational groups, shown in table A-7, are better indicators of wage trends than are earnings changes for individual jobs within the groups.

Average earnings reflect composite, areawide estimates. Industries and establishments differ in pay level and job staffing, and thus contribute differently to the estimates for each job. Pay averages may fail to reflect accurately the wage differential among jobs in individual establishments.

Average pay levels for men and women in selected occupations should not be assumed to reflect differences in pay of the sexes within individual establishments. Factors which may contribute to differences include progression within established rate ranges (only the rates paid incumbents are collected) and performance of specific duties within the general survey job descriptions. Job descriptions used to classify employees in these surveys usually are more generalized than those used in individual establishments and allow for minor differences among establishments in specific duties performed.

Occupational employment estimates represent the total in all establishments within the scope of the study and not the number actually surveyed. Because occupational structures among establishments differ, estimates of occupational employment obtained from the sample of establishments studied serve only to indicate the relative importance of the jobs studied. These differences in occupational structure do not affect materially the accuracy of the earnings data.

Wage trends for selected occupational groups

Indexes in table A-7 measure wages at a given time expressed as a percent of wages during the base period. Subtracting 100 from the index yields the percent change in wages from the base period to the date of the index. The percent increases in table A-7 relate to wage changes between the indicated dates. Annual rates of increase, where shown, reflect the amount of increase for 12 months when the time span between surveys was other than 12 months. These computations are based on the assumption that wages increased at a constant rate between surveys.

The indexes and percent increases are based on changes in average hourly earnings of men and women in establishments reporting the jobs listed below in both the current and previous year (matched establishments). The data are adjusted to remove the effect on average earnings of employment shifts among establishments and turnover of establishments included in survey samples. The percent increases, however, are still affected by factors other than wage increases. Turnover may affect an establishment average for an occupation when workers are paid under plans providing a range of wage rates for individual jobs. In periods of increased hiring, for example, new employees may enter at the bottom of the range, depressing the average without a change in wage rates.

Occupations used to compute wage trends are:

Office clerical

Secretaries
Stenographers I and II
Typists I and II
Key entry operators I and II
Accounting clerks I, II, III, and IV
Payroll clerks
File clerks I, II, and III
Messengers
Order clerks I and II
Switchboard operators

Electronic data processing

Computer systems analysts I, II, III, and IV
Computer programmers I, II, III, and IV
Computer operators I, II, III, and IV

Industrial nurses

Registered industrial nurses

Skilled maintenance

Carpenters
Electricians
Painters
Machinists
Mechanics (machinery)
Pipefitters
Motor vehicle mechanics
Tool and die makers

Unskilled plant

Janitors, porters, and cleaners
Material handling laborers

Percent changes for individual areas in the program are computed as follows:

1. Each occupation is assigned a weight based on its proportion of employment in the occupational group in the earlier of the 2 years being compared. If for example, 1,000 workers were reported in the skilled maintenance group in the earlier year and 200 of these workers were painters, the weight assigned to painters would be 0.20. Using a constant employment weight dampens the effects of employment shifts on wage change measures.
2. Average earnings are computed for each occupation for the 2 years being compared. Earnings are used only from matched establishments; that is, establishments that are in the survey both years.
3. Group averages are computed by multiplying the weight of each occupation (step 1) by the occupation's average earnings for each year (step 2). The products are totaled to obtain group averages.

4. The ratio of group averages for 2 consecutive years is computed by dividing the average for the current year by the average for the earlier year. The result—expressed as a percent—less 100 is the percent change.

Pay relationships in establishments

Tables A-8 through A-11 compare average pay of occupations in individual establishments. These comparisons, expressed as pay relatives (pay for one of the occupations equals 100), differ from comparisons of overall survey averages, such as those shown in tables A-1 through A-6. The latter reflect differences in contributions to the survey averages by establishments with disparate pay levels; the pay relative comparisons are not affected by such differences. The following procedures are used to compute relatives in tables A-8 through A-11:

1. Establishments employing workers in both of the paired occupations were identified.

2. Pay levels (averages) for the two occupations were weighted by the combined employment of both jobs to reflect each establishment's contribution to the totals used in this comparison.

3. The weighted pay levels of the two jobs were summed separately; each total was divided by the other and the quotients multiplied by 100 to produce the two pay relatives shown for each job pairing.

Establishment practices and employee benefits

Tabulations on selected establishment practices and employee benefits (B-series tables) are not presented in this bulletin. In this These tabulations on minimum entrance salaries for inexperienced office workers; shift differentials; scheduled weekly hours and days; paid holidays; paid vacations; insurance, health, and retirement plans; and other selected benefits are presented (in the B-series tables) in a previous bulletin for this area.

[1]The Bureau also conducts more limited area studies in over 100 areas at the request of the Employment Standards Administration of the U.S. Department of Labor.

Appendix table 1. Establishments and workers within scope of survey and number studied in Minneapolis-St. Paul, MN-WI,[1] February 1989

Industry division[2]	Minimum employment in establishments in scope of survey	Number of establishments		Workers in establishments		
		Within scope of survey[3]	Studied	Within scope of survey[4]		Studied
				Number	Percent	
All establishments						
All divisions	–	1,385	224	516,552	100	235,718
Manufacturing	100	370	67	185,721	36	104,604
Nonmanufacturing	–	1,015	157	330,831	64	131,114
Transportation, communication, and other public utilities[5]	100	72	27	45,743	9	36,444
Wholesale trade[6]	50	185	19	27,517	5	8,662
Retail trade[6]	100	105	24	70,745	14	39,448
Finance, insurance, and real estate[6]	50	201	29	76,680	15	22,785
Services[6 7]	50	452	58	110,146	21	23,775
Large establishments						
All divisions	–	246	95	345,951	100	212,589
Manufacturing	500	75	34	131,636	38	98,573
Nonmanufacturing	–	171	61	214,315	62	114,016
Transportation, communication, and other public utilities[5]	500	11	9	34,356	10	32,376
Wholesale trade[6]	500	4	4	5,982	2	5,982
Retail trade[6]	500	30	16	56,815	16	37,698
Finance, insurance, and real estate[6]	500	51	13	55,958	16	20,416
Services[6 7]	500	75	19	61,204	18	17,544

[1] The Minneapolis-St. Paul, MN-WI Metropolitan Statistical Area, as defined by the Office of Management and Budget through October 1984, consists of Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Washington, and Wright Counties, MN; and St. Croix County, WI. The "workers within scope of survey" estimates provide a reasonably accurate description of the size and composition of the labor force included in the survey. Estimates are not intended, however, for comparison with other statistical series to measure employment trends or levels since (1) planning of wage surveys requires establishment data compiled considerably in advance of the payroll period studied, and (2) small establishments are excluded from the scope of the survey.

[2] The 1972 edition of the *Standard Industrial Classification Manual* was used to classify establishments by industry division. All government operations are excluded from the scope of the survey.

[3] Includes all establishments with total employment at or above the minimum limitation. All outlets (within the area) of nonmanufacturing companies are considered as one establishment when located within the same industry division.

[4] Includes all workers in all establishments with total employment (within the area) at or above the minimum limitation.

[5] Abbreviated to "transportation and utilities" in the A-series tables. Taxicabs and services incidental to water transportation are excluded.

[6] Separate data for this division are not presented in the A-series tables, but the division is represented in the "all industries" and "nonmanufacturing" estimates.

[7] Hotels and motels; laundries and other personal services; business services; automobile repair, rental, and parking; motion pictures; nonprofit membership organizations (excluding religious and charitable organizations); and engineering and architectural services.

Appendix B. Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field representatives in classifying into appropriate occupations workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits grouping of occupational wage rates representing comparable job content. Because of this emphasis on comparability of occupational content, the Bureau's job descriptions may differ significantly from those in use in individual establishments or those prepared for other purposes. In applying these job descriptions, the Bureau's field representatives are instructed to exclude working supervisors; apprentices; and part-time, temporary, and probationary workers. Handicapped workers whose earnings are reduced because of their handicap are also excluded. Learners, beginners, and trainees, unless specifically included in the job description, are excluded.

The titles and numerical codes below the job titles in this appendix are taken from the 1980 edition of the *Standard Occupational Classification Manual* (SOC), issued by the U.S. Department of Commerce, Office of Federal Statistical Policy and Standards.

In general, the Bureau of Labor Statistics' occupational descriptions are much more specific than those found in the SOC manual. The BLS occupation, "Registered Industrial Nurse," for example, is limited to workers providing medical assistance and other related services (e.g., health education) to persons who are ill or become ill or suffer an injury in a factory or other establishment. The SOC occupation (code 29) includes a variety of registered nurses (e.g., school nurse, head nurse, general duty nurse, private duty nurse) that are excluded from the BLS description.

Thus, in comparing the results of this survey with other sources, factors such as differences in occupational definitions and survey scope should be taken into consideration.

Office

SECRETARY

(4622: Secretary)

Provides principal secretarial support in an office, usually to one individual, and, in some cases, also to the subordinate staff of that individual. Maintains a close and highly responsive relationship to the day-to-day activities of the supervisor and staff. Works fairly independently, receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties requiring a knowledge of office routine and an understanding of the organization, programs, and procedures related to the work of the office.

Exclusions. Not all positions that are titled "secretary" possess the above characteristics. Examples of positions which are excluded from the definition are as follows:

a. Clerks or secretaries working under the direction of secretaries or administrative assistants as described in e;
b. Stenographers not fully performing secretarial duties;
c. Stenographers or secretaries assigned to two or more professional, technical, or managerial persons of equivalent rank;
d. Assistants or secretaries performing any kind of technical work, e.g., personnel, accounting, or legal work;
e. Administrative assistants or supervisors performing duties which are more difficult or more responsible than the secretarial work described in LR-1 through LR-4;
f. Secretaries receiving additional pay primarily for maintaining confidentiality of payroll records or other sensitive information;
g. Secretaries performing routine receptionist, typing, and filing duties following detailed instructions and guidelines; these duties are less responsible than those described in LR-1 below;
h. Trainees.

Classification by level. Secretary jobs which meet the required characteristics are matched at one of five levels according to two factors: (a) Level of the secretary's supervisor within the overall organizational structure, and (b) level of the secretary's responsibility. The table following the explanations of these factors indicates the level of the secretary for each combination of factors.

Level of Secretary's Supervisor (LS)

Secretaries should be matched at one of the three LS levels below best describing the organization of the secretary's supervisor.

LS-1

Organizational structure is not complex and internal procedures and administrative controls are simple and informal; supervisor directs staff through face-to-face meetings.

LS-2

Organizational structure is complex and is divided into subordinate groups that usually differ from each other as to subject matter, function, etc.; supervisor usually directs staff through intermediate supervisors; internal procedures and administrative controls are formal. An entire organization (e.g., division, subsidiary, or parent organization) may contain a variety of subordinate groups which meet the LS-2 definition. Therefore, it is not unusual for one LS-2 supervisor to report to another LS-2 supervisor.

The presence of subordinate supervisors does not by itself mean LS-2 applies, e.g., a clerical processing organization divided into several units, each performing very similar work, is placed in LS-1.

In smaller organizations or industries such as retail trade, with relatively few organizational levels, the supervisor may have an impact on the policies and major programs of the entire organization, and may deal with important outside contacts, as described in LS-3.

LS-3

Organizational structure is divided into two or more subordinate supervisory levels (of which at least one is a managerial level) with several subdivisions at each level. Executive's program(s) are usually interlocked on a direct and continuing basis with other major organizational segments, requiring constant attention to extensive formal coordination, clearances, and procedural controls. Executive typically has: Financial decisionmaking authority for assigned program(s); considerable impact on the entire organization's financial position or image; and responsibility for, or has staff specialists in, such areas as personnel and administration for assigned organization. Executive plays an important role in determining the policies and major programs of the entire organization, and spends considerable time dealing with outside parties actively interested in assigned program(s) and current or controversial issues.

Level of Secretary's Responsibility (LR)

This factor evaluates the nature of the work relationship between the secretary and the supervisor or staff, and the extent to which the secretary is expected to exercise initiative and judgment. Secretaries should be matched at the level best describing their level of responsibility. When a position's duties span more than one LR level, the introductory paragraph at the beginning of each LR level should be used to determine which of the levels best matches the position. (Typically, secretaries performing at the higher levels of responsibility also perform duties described at the lower levels.)

LR-1

Carries out recurring office procedures independently. Selects the guideline or reference which fits the specific case. Supervisor provides specific instructions on new assignments and checks completed work for accuracy. Performs varied duties including or comparable to the following:

a. Responds to routine telephone requests which have standard answers; refers calls and visitors to appropriate staff. Controls mail and assures timely staff response; may send form letters;
b. As instructed, maintains supervisor's calendar, makes appointments, and arranges for meeting rooms;
c. Reviews materials prepared for supervisor's approval for typographical accuracy and proper format;
d. Maintains recurring internal reports, such as: Time and leave records, office equipment listings, correspondence controls, training plans, etc.;
e. Requisitions supplies, printing, maintenance, or other services. Types, takes and transcribes dictation, and establishes and maintains office files.

LR-2

Handles differing situations, problems, and deviations in the work of the office according to the supervisor's general instructions, priorities, duties, policies, and program goals. Supervisor may assist secretary with special assignments. Duties include or are comparable to the following:

a. Screens telephone calls, visitors, and incoming correspondence; personally responds to requests for information concerning office procedures; determines which requests should be handled by the supervisor, appropriate staff member, or other offices. May prepare and sign routine, nontechnical correspondence in own or supervisor's name;
b. Schedules tentative appointments without prior clearance. Makes arrangements for conferences and meetings and assembles established background materials, as directed. May attend meetings and record and report on the proceedings;
c. Reviews outgoing materials and correspondence for internal consistency and conformance with supervisor's procedures; assures that proper clearances have been obtained, when needed;
d. Collects information from the files or staff for routine inquiries on office program(s) or periodic reports. Refers nonroutine requests to supervisor or staff;
e. Explains to subordinate staff supervisor's requirements concerning office procedures. Coordinates personnel and administrative forms for the office and forwards for processing.

LR-3

Uses greater judgment and initiative to determine the approach or action to take in nonroutine situations. Interprets and adapts guidelines, including unwritten policies, precedents, and practices, which are not always completely applicable to changing situations. Duties include or are comparable to the following:

a. Based on a knowledge of the supervisor's views, composes correspondence on own initiative about administrative matters and general office policies for supervisor's approval;
b. Anticipates and prepares materials needed by the supervisor for conferences, correspondence, appointments, meetings, telephone calls, etc;, and informs supervisor on matters to be considered;
c. Reads publications, regulations, and directives and takes action or refers those that are important to the supervisor and staff;
d. Prepares special or one-time reports, summaries, or replies to inquiries, selecting relevant information from a variety of sources such as reports, documents, correspondence, other offices, etc., under general direction;
e. Advises secretaries in subordinate offices on new procedures; requests information needed from the subordinate office(s) for periodic or special conferences, reports, inquiries, etc. Shifts clerical staff to accommodate workload needs.

LR-4

Handles a wide variety of situations and conflicts involving the clerical or administrative functions of the office which often cannot be brought to the attention of the executive. The executive sets the overall objectives of the work. Secretary may participate in developing the work deadlines. Duties include or are comparable to the following:

a. Composes correspondence requiring some understanding of technical matters; may sign for executive when technical or policy content has been authorized;
b. Notes commitments made by executive during meetings and arranges for staff implementation. On own initiative, arranges for staff member to represent organization at conferences and meetings, establishes appointment priorities, or reschedules or refuses appointments or invitations;
c. Reads outgoing correspondence for executive's approval and alerts writers to any conflict with the file or departure from policies or executive's viewpoints; gives advice to resolve the problems;
d. Summarizes the content of incoming materials, specially gathered information, or meetings to assist executive; coordinates the new information with background office sources; draws attention to important parts or conflicts;
e. In the executive's absence, ensures that requests for action or information are relayed to the appropriate staff member; as needed, interprets request and helps implement action; makes sure that information is furnished in timely manner; decides whether executive should be notified of important or emergency matters.

Exclude secretaries performing any of the following duties:

Acts as office manager for the executive's organization, e.g., determines when new procedures are needed for changing situations and devises and implements alternatives; revises or clarifies procedures to eliminate conflict or duplication; identifies and resolves various problems that affect the orderly flow of work in transactions with parties outside the organization.

Prepares agenda for conferences; explains discussion topics to participants; drafts introductions and develops background information and prepares outlines for executive or staff member(s) to use in writing speeches.

Advises individuals outside the organization on the executive's views on major policies or current issues facing the organization; contacts or responds to contacts from high-ranking outside officials (e.g., city or State officials, members of Congress, presidents of national unions or large national or international firms, etc.) in unique situations. These officials may be relatively inaccessible, and each contact typically must be handled differently, using judgment and discretion.

Criteria For Matching Secretaries By Level

Level of Secretary's Supervisor	Level of Secretary's Responsibility			
	LR-1	LR-2	LR-3	LR-4
LS-1	I	II	III	IV
LS-2	I	III	IV	V
LS-3	I	IV	V	V

STENOGRAPHER

(4623: Stenographer)

Primary duty is to take dictation using shorthand, and to transcribe the dictation. May also type from written copy. May operate from a stenographic pool. May occasionally transcribe from voice recordings.

Excluded from this definition are:

a. Trainee positions not requiring a fully qualified stenographer;
b. Secretaries providing the principal secretarial support in an office and performing more responsible and discretionary tasks, as described in LR-1 through LR-4 in the secretary definition above;
c. Stenographers who take dictation involving the frequent use of a wide variety of technical or specialized vocabulary. Typically this kind of vocabulary cannot be learned in a relatively short period of time, e.g., a month or two;
d. Stenographers, such as shorthand reporters, who record material verbatim at hearings, conferences, or similar proceedings.

Stenographer I

Takes and transcribes dictation, receiving specific assignments along wit.. detailed instructions on such requirements as form and presentation. The transcribed material is typically reviewed in rough draft, and the final transcription is reviewed for conform-

ance with the rough draft. May maintain files, keep simple records, or perform other relatively routine clerical tasks.

Stenographer II

Takes and transcribes dictation determining the most appropriate format. Performs stenographic duties requiring significantly greater independence and responsibility than Stenographer I. Supervisor typically provides general instructions. Work requires a thorough working knowledge of general business and office procedures and of the specific business operations, organizations, policies, procedures, files, workflow, etc. Uses this knowledge in performing stenographic duties and responsible clerical tasks such as maintaining follow-up files; assembling material for reports, memoranda, and letters; composing simple letters from general instructions; reading and routing incoming mail; answering routine questions, etc.

TYPIST

(4624: Typist)

Uses a manual, electric, or automatic typewriter to type various materials. Included are automatic typewriters that are used only to record text and update and reproduce previously typed items from magnetic cards or tape. May include typing of stencils, mats, or similar materials for use in duplicating processes. May do clerical work involving little special training, such as keeping simple records, filing records and reports, or sorting and distributing incoming mail.

Excluded from this definition is work that involves:

a. Typing directly from spoken material that has been recorded on disks, cylinders, belts, tapes, or other similar media;
b. The use of varitype machines, composing equipment, or automatic equipment in preparing material for printing; and
c. Familiarity with specialized terminology in various keyboard commands to manipulate or edit the recorded text to accomplish revisions, or to perform tasks such as extracting and listing items from the text, or transmitting text to other terminals, or using "sort" commands to have the machine reorder material. Typically requires the use of automatic equipment which may be either computer linked or have a programmable memory so that material can be organized in regularly used formats or preformed paragraphs which can then be coded and stored for future use in letters or documents.

Typist I

Performs *one or more of the following:* Copy typing from rough or clear drafts; or routine typing of forms, insurance policies, etc.; or setting up simple standard tabulations; or copying more complex tables already set up and spaced properly.

Typist II

Performs *one or more of the following:* Typing material in final form when it involves combining material from several sources; or responsibility for correct spelling, syllabication, punctuation, etc., of technical or unusual words or foreign language material; or planning layout and typing of complicated statistical tables to maintain uniformity and balance in spacing. May type routine form letters, varying details to suit circumstances.

WORD PROCESSOR

(4624: Typist)

Primary duty is to operate word-processing equipment to enter, store, retrieve, change, and present text or tabulations. Produces a variety of printed copy such as letters, documents, or reports. May enter regularly used formats or stored paragraphs that are organized and coded for future use. Recorded texts can be changed by rearranging paragraphs, replacing words, shifting lines, etc.

(Word-processing equipment typically has a full- or partial-page video-display screen (CRT) and a separate printer. The equipment may be integrated with a digital computer, have telecommunications capabilities, and also have capabilities for adding to or upgrading features. Automatic or electronic typewriters with limited text-editing capabilities, and often with single-line electronic display "windows," are not considered word-processing equipment.)

Excluded from this definition are:

a. Workers whose primary function is to enter a data base for purposes other than composition (see key entry operator);
b. Workers who use equipment and data base for purposes such as accounting, inventory control, sales, or original writing and editing;
c. Workers responsible for preparation of published reports, including page layout or selection of different type sizes.

Positions are classified into levels on the basis of the following definitions:

Word Processor I

Performs tasks requiring a knowledge of the word-processing equipment and familiarity with the formats and forms used in the establishment. Proficiency in grammar, spelling, and punctuation is also required to produce printed materials accurately. May refer problems to supervisor or higher level processor, or refer to operating manual.

Word Processor II

Work at this level requires considerable classroom or on-the-job training and may involve working directly with task originator rather than through supervisor. In addition to work assignments described for level I, duties include *one or more of the following:*

a. Uses the more sophisticated features of the equipment to carry out complex assignments, such as sorting, merging, and organizing text, or maintaining files;
b. Applies knowledge of specialized terminology or foreign language;
c. Tests new applications and procedures; or
d. Trains lower level processors.

KEY ENTRY OPERATOR

(4793: Data entry keyer)

Operates keyboard-controlled data entry device such as keypunch machine or key-operated magnetic tape or disk encoder to transcribe data into a form suitable for computer processing. Work requires skill in operating an alphanumeric keyboard and an understanding of transcribing procedures and relevant data entry equipment.

Positions are classified into levels on the basis of the following definitions:

Key Entry Operator I

Work is routine and repetitive. Under close supervision or following specific procedures or detailed instructions, works from various standardized source documents which have been coded and require little or no selecting, coding, or interpreting of data to be entered. Refers to supervisor problems arising from erroneous items, codes, or missing information.

Key Entry Operator II

Work requires the application of experience and judgment in selecting procedures to be followed and in searching for, interpreting, selecting, or coding items to be entered from a variety of source documents. On occasion may also perform routine work as described for level I.

NOTE: Excluded are operators above level II using the key entry controls to access, read, and evaluate the substance of specific records to take substantive actions, or to make entries requiring a similar level of knowledge.

ACCOUNTING CLERK

(4712: Bookkeeper and accounting and auditing clerk)

Performs one or more accounting tasks such as posting to registers and ledgers; balancing and reconciling accounts; verifying the internal consistency, completeness, and mathematical accuracy of accounting documents; assigning prescribed accounting distribution codes; examining and verifying the clerical accuracy of various types of reports, lists, calculations, postings, etc.; preparing journal vouchers; or making entries or adjustments to accounts.

Levels I and II require a basic knowledge of routine clerical methods and office practices and procedures as they relate to the clerical processing and recording of transactions and accounting information. Levels III and IV require a knowledge and understanding of the established and standardized bookkeeping and accounting procedures and techniques used in an accounting system, or a segment of an accounting system, where there are few variations in the types of transactions handled. In addition, some jobs at each level may require a basic knowledge and understanding of the terminology, codes, and processes used in an automated accounting system.

Accounting Clerk I

Performs very simple and routine accounting clerical operations, for example, recognizing and comparing easily identified numbers and codes on similar and repetitive accounting documents, verifying mathematical accuracy, and identifying discrepancies and bringing them to the supervisor's attention. Supervisor gives clear and detailed instructions for specific assignments. Employee refers to supervisor all matters not covered by instructions. Work is closely controlled and reviewed in detail for accuracy, adequacy, and adherence to instructions.

Accounting Clerk II

Performs one or more routine accounting clerical operations, such as: Examining, verifying, and correcting accounting transactions to ensure completeness and accuracy of data and proper identification of accounts, and checking that expenditures will not exceed obligations in specified accounts; totaling, balancing, and reconciling collection vouchers; posting data to transaction sheets where employee identifies proper accounts and items to be posted; and coding documents in accordance with a chart (listing) of accounts. Employee follows specific and detailed accounting procedures. Completed work is reviewed for accuracy and compliance with procedures.

Accounting Clerk III

Uses a knowledge of double entry bookkeeping in performing one or more of the following: Posts actions to journals, identifying subsidiary accounts affected and debit and credit entries to be made and assigning proper codes; reviews computer printouts against manually maintained journals, detecting and correcting erroneous postings, and preparing documents to adjust accounting classifications and other data; or reviews lists of transactions rejected by an automated system, determining reasons for rejections, and preparing necessary correcting material. On routine assignments, employee selects and applies established procedures and techniques. Detailed instructions are provided for difficult or unusual assignments. Completed work and methods used are reviewed for technical accuracy.

Accounting Clerk IV

Maintains journals or subsidiary ledgers of an accounting system and balances and reconciles accounts. Typical duties include one or both of the following: Reviews invoices and statements (verifying information, ensuring sufficient funds have been obligated, and if questionable, resolving with the submitting unit, determining accounts involved, coding transactions, and processing material through data processing for application in the accounting system); and/or analyzes and reconciles computer printouts with operating unit reports (contacting units and researching causes of discrepancies, and taking action to ensure that accounts balance). Employee resolves problems in recurring assignments in accordance with previous training and experience. Supervisor provides suggestions for handling unusual or nonrecurring transactions. Conformance with requirements and technical soundness of completed work are reviewed by the supervisor or are controlled by mechanisms built into the accounting system.

NOTE: Excluded from level IV are positions responsible for maintaining either a general ledger or a general ledger in combination with subsidiary accounts.

PAYROLL CLERK

(4713: Payroll and timekeeping clerk)

Performs the clerical tasks necessary to process payrolls and to maintain payroll records. Work involves *most of the following*: Processing workers' time or production records; adjusting workers' records for changes in wage rates, supplementary benefits, or tax deductions; editing payroll listings against source records; tracing and correcting errors in listings; and assisting in preparation of periodic summary payroll reports. In a nonautomated payroll system, computes wages. Work may require a practical knowledge of governmental regulations, company payroll policy, or the computer system for processing payrolls.

FILE CLERK

(4696: File clerk)

Files, classifies, and retrieves material in an established filing system. May perform clerical and manual tasks required to maintain files. Positions are classified into levels on the basis of the following definitions:

File Clerk I

Performs routine filing of material that has already been classified or which is easily classified in a simple serial classification system (e.g., alphabetical, chronological, or numerical). As requested, locates readily available material in files and forwards material; and may fill out withdrawal charge. May perform simple clerical and manual tasks required to maintain and service files.

File Clerk II

Sorts, codes, and files unclassified material by simple (subject matter) headings or partly classified material by finer subheadings. Prepares simple related index and cross-reference aids. As requested, locates clearly identified material in files and forwards material. May perform related clerical tasks required to maintain and service files.

File Clerk III

Classifies and indexes file material such as correspondence, reports, technical documents, etc., in an established filing system containing a number of varied subject matter files. May also file this material. May keep records of various types in conjunction with the files. May lead a small group of lower level file clerks.

MESSENGER

(4745: Messenger)

Performs various routine duties such as running errands, operating minor office machines such as sealers or mailers, opening mail, distributing mail on a regularly scheduled route or in a familiar area, and other minor clerical work. May deliver mail that requires some special handling, e.g., mail that is insured, registered, or marked for special delivery.

Excluded are positions which include any of the following as significant duties:

a. Operating motor vehicles;
b. Delivering valuables or security-classified mail when the work requires a continuing knowledge of special procedures for handling such items;
c. Weighing mail, determining postage, or recording and controlling registered, insured, and certified mail in the mail room;
d. Making deliveries to unfamiliar or widely separated buildings or points which are not part of an established route; or
e. Directing other workers.

ORDER CLERK

(4664: Order clerk)

Receives written or verbal customers' purchase orders for material or merchandise from customers or sales people. Work typically involves some combination of the following duties: Quoting prices; determining availability of ordered items and suggesting substitutes when necessary; advising expected delivery date and method of delivery; recording order and customer information on order sheets; checking order sheets for accuracy and adequacy of information recorded; ascertaining credit rating of customer; furnishing customer with acknowledgment of receipt of order; following up to see that order is delivered by the specified date or to let customer know of a delay in delivery; maintaining order file; checking shipping invoice against original order.

Exclude workers paid on a commission basis or whose duties include any of the following: Receiving orders for services rather than for material or merchandise; providing customers with consultative advice using knowledge gained from engineering or extensive technical training; emphasizing selling skills; handling material or merchandise as an integral part of the job.

Positions are classified into levels according to the following definitions:

Order Clerk I

Handles orders involving items which have readily identified uses and applications. May refer to a catalog, manufacturer's manual, or similar document to insure that proper item is supplied or to verify price of ordered item.

Order Clerk II

Handles orders that involve making judgments such as choosing which specific product or material from the establishment's product lines will satisfy the customer's needs, or determining the price to be quoted when pricing involves more than merely referring to a price list or making some simple mathematical calculations.

RECEPTIONIST

(4645: Receptionist)

Greets visitors, determines nature of visits, and directs visitors to appropriate persons. Receptionist duties may also include providing information, making appointments, answering a telephone (other than switchboard or console), keeping a log of visitors, and issuing visitor passes. May also perform typing or other routine clerical duties which may occupy a major portion of time, and are usually performed at the reception desk.

This classification excludes workers operating a telephone switchboard or console, performing guard duties, or performing more difficult clerical duties.

SWITCHBOARD OPERATOR

(4732: Telephone operator)

Operates a telephone switchboard or console used with a private branch exchange (PBX) system to relay incoming, outgoing, and intrasystem calls. May provide information to callers, record and transmit messages, keep record of calls placed and toll charges. Besides operating a telephone switchboard or console, may also type or perform routine clerical work (typing or routine clerical work may occupy the major portion of the worker's time, and is usually performed while at the switchboard or console). Chief or lead operators in establishments employing more than one operator are excluded. For an operator who also acts as a receptionist, see Switchboard operator-receptionist.

SWITCHBOARD OPERATOR-RECEPTIONIST

(4645: Receptionist)

At a single-position telephone switchboard or console, acts both as an operator—see Switchboard operator—and as a receptionist. Receptionist's work involves such duties as greeting visitors; determining nature of visitor's business and providing appropriate information; referring visitor to appropriate person in the organization or contacting that person by telephone and arranging an appointment; keeping a log of visitors.

Professional and Technical

NOTE: The following descriptions for computer systems analysts, programmers, and operators are derived from job descriptions developed for the National Survey of Professional, Administrative, Technical, and Clerical Pay (PATC). For the most part, they are comparable to the PATC descriptions for systems analysts and programmers levels I to IV and computer operators levels I to III. The level IV computer operator description is comparable to the combined levels IV, V, and VI PATC descriptions.

COMPUTER SYSTEMS ANALYST

(171:Computer systems analyst)

Analyzes business or scientific problems for resolution through electronic data processing. Gathers information from users, defines work problems, designs a system of computer programs and procedures to resolve the problems, and develops complete specifications (precise descriptions) to enable computer programmers to prepare required programs. May write the computer programs.

NOTE: Workers performing both systems analysis and programming should be classified as systems analysts if this is the skill used to determine their pay.

Excluded are:

a. Trainees who receive detailed directives and work plans, select authorized procedures for use in specific situations, and seek assistance for deviations and problems;
b. Positions which require a bachelor's degree in a specific scientific field (other than computer science); however, positions are potential matches where the required degree may be from any of several possible scientific fields;
c. Workers who primarily analyze and evaluate problems concerning computer equipment or its selection or utilization;
d. Computer systems analysts dealing primarily with system software which provides basic services for processing other work; however, positions matching this definition may develop a "total package" which includes not only analyzing work problems to be processed but also selecting the computer equipment and system software;
e. Top technical experts above level IV who develop broad unprecedented computer systems and/or conduct critical studies central to the success of large organizations having extensive technical or highly diversified computer requirements; and
f. Supervisors responsible for, or participating in hiring, firing, curtailing projects, reorganizing, or reallocating resources.

Positions are classified into levels on the basis of the following definitions:

Computer Systems Analyst I

Initial assignments are designed to expand practical experience in applying systems analysis techniques and procedures. Works independently carrying out factfinding and analysis of a single activity or routine problem. Applies established procedures where nature of system, feasibility, computer equipment, and programming language have already been decided. Adapts guides to specific situations. May solve routine user problems by modifying the existing system following clear precedents.

Supervisor defines objectives, priorities, and deadlines. Obtains advice where precedents are unclear or not available.

May direct technicians and others who assist in specific assignments.

Computer Systems Analyst II

Works independently developing or modifying a system of several varied sequences or formats where the nature of the system is predetermined. Recognizes probable interaction of related computer systems and predicts impact of a change in assigned system.

Typical duties include reviewing project proposals; gathering facts; analyzing data, preparing project synopses comparing alternatives; preparing specifications for programs; resolving processing problems; coordinating work with programmers; and orienting users.

Work requires competence in most phases of systems analysis and knowledge of system software and work processes.

May direct lower level analysts on assigned work. *OR*

Works on a segment of a complex data processing system as described for level III. Works independently on routine assignments and receives instruction and guidance on complex assignments.

Computer Systems Analyst III

Works independently maintaining and modifying complex systems or developing new subsystems. Systems typically input data from diverse sources and have multiple users.

Typical duties include guiding users in formulating requirements; analyzing project proposals; arbitrating conflicts between users; recommending optimum approach; and developing systems design. May serve as lead analyst directing and integrating the work of one or two lower level analysts.

Computer Systems Analyst IV

As a team or project leader, provides complete systems design in a highly complex area. The systems design establishes the framework from feasibility studies to post-implementation evaluation. May serve as the technical authority for a design area. At least one team member performs work at level III. *AND/OR*

As a staff specialist or consultant, resolves unique and unyielding systems problems using new technology. May be assisted on project by other analysts or technicians.

COMPUTER PROGRAMMER

(397:Programmer)

Converts specifications (precise descriptions) of business or scientific problems into a sequence of detailed instructions to solve the problems by digital computer. Draws program flow charts to describe the processing of data and develops the precise steps and processing logic which, when entered into the computer in coded language, cause the manipulation of data to achieve desired results. Tests and corrects programs and prepares instructions for operators who control the computer during production runs. Modifies programs to increase operating efficiency or to respond to changes in work processes; maintains records to document program development and revisions.

NOTE: Workers performing both systems analysis and programming should be classified as systems analysts if this is the skill used to determine their pay.

Excluded are:

a. Positions which require a bachelor's degree in a specific scientific field (other than computer science); however, positions are potential matches where the required degree may be from any of several possible scientific fields;
b. Workers who primarily analyze and evaluate problems concerning computer equipment or its selection or utilization;
c. Computer programmers (e.g., systems programmers) dealing primarily with system software which provides basic services for processing other work; however, positions matching this definition may develop a "total package" which includes not only analyzing work problems to be processed but also selecting the computer equipment and system software;
d. Employees with significant responsibility for supervising workers other than programmers or functions other than computer programming;
e. Supervisors responsible for, or participating in hiring, firing, curtailing projects, reorganizing, or reallocating resources; and
f. Team leaders and consultants above level IV who define highly complex programming problems and direct the development of computer programs for their solution, *AND/OR*
Team leaders and consultants who design improvements for highly complex programming problems where few precedents exist.

Positions are classified into levels on the basis of the following definitions:

Computer Programmer I

Receives classroom and/or on-the-job training in computer programming concepts and requirements of the subject-matter field. Performs elementary programming tasks such as drawing flow charts, writing operator instructions, or coding and testing simple programs.

Detailed step-by-step instructions are given; work is closely monitored in progress and reviewed in detail upon completion. Deviations must be authorized by supervisor.

May perform routine programming tasks as described in level II under close supervision. Also may perform elementary factfinding concerning a specific work process.

Computer Programmer II

Maintains and modifies routine programs. Work progresses from initial assignments designed to develop competence to work requiring a knowledge of established procedures and data processing requirements. Typical tasks include amending flow charts; coding, testing, and documenting changes; and writing routine new programs.

May evaluate simple interrelationships in programs and obtain information from users to modify routine programs.

Assignments have clear-cut and complete specifications and the format of the final product is very similar to that of the inputs. Work is monitored in progress and reviewed upon completion.

Computer Programmer III

As a fully qualified computer programmer, develops, modifies, and maintains conventional programs. Uses standard procedures and detailed specifications to independently devise program logic (may include translating mathematical notation), modify interrelationship of files and records, diagnose and correct errors, test and document work, and write computer operator instructions. The programs developed are typically linked to several other programs, with a variety of input records and varied formats produced in the output.

In addition, may analyze a single activity or routine problem when the nature of the programs, feasibility, and type of computer language and equipment have already been determined. Completed work is reviewed for conformance to standards, timeliness, and efficiency. May also guide or instruct lower level programmers, technicians, and others who assist on assignments. *OR*

Under close supervision, works on complex programs as described in level IV.

Computer Programmer IV

As an expert programmer, independently develops, modifies, and maintains complex programs which produce several interrelated but different products. Programs use data from diverse sources and have multiple users. Tests, documents, and writes operating instructions for all work.

May perform programming analysis such as investigating the feasibility of developing alternate programs, assisting users in defining needs, or participating on an EDP and user team working on large and complicated programs.

Completed work is reviewed for timeliness, compatibility with other work, and effectiveness in meeting requirements. May function as team leader of a few lower level programmers or technicians on assigned work.

COMPUTER OPERATOR

(4612:Computer operator)

Monitors and operates the control console of either a main-frame digital computer or a group of mini-computers, in accordance with operating instructions, to process data. Work is characterized by the following:

- Studies operating instructions to determine equipment setup needed;
- Loads equipment with required items (tapes, cards, paper, etc.);
- Switches necessary auxiliary equipment into system;
- Starts and operates console;
- Diagnoses and corrects equipment malfunctions;
- Reviews error messages and makes corrections during operation or refers problems;
- Maintains operating record.

May test run new or modified programs and assist in modifying systems or programs. Included within the scope of this definition are fully qualified computer operators, trainees working to become fully qualified operators, and lead operators providing technical assistance to lower level positions.

Excluded are:

a. Workers operating small computer systems where there is little or no opportunity for operator intervention in program processing and few requirements to correct equipment malfunctions;
b. Peripheral equipment operators and remote terminal or computer operators who do not run the control console of either a main-frame digital computer or a group of mini-computers (see peripheral equipment operator); and
c. Workers using the computer for scientific, technical, or mathematical work when a knowledge of the subject matter is required.

Positions are classified into levels on the basis of the following definitions:

Computer Operator I

Receives on-the-job training in operating the control console (sometimes augmented by classroom training). Works under close personal supervision and is provided detailed written or oral guidance before and during assignments. As instructed, resolves common operating problems. May serve as an assistant operator working under close supervision or performing a portion of a more senior operator's work.

Computer Operator II

Processes scheduled routines which present few difficult operating problems (e.g., infrequent or easily resolved error conditions). In response to computer output instructions or error conditions, applies standard operating or corrective procedure. Refers problems which do not respond to preplanned procedure. May serve as an assistant operator, working under general supervision.

Computer Operator III

Processes a range of scheduled routines. In addition to operating the system and resolving common error conditions, diagnoses and acts on machine stoppage and error conditions not fully covered by existing procedures and guidelines (e.g., resetting switches and other controls or making mechanical adjustments to maintain or restore equipment operations). In response to computer output instructions or error conditions, may deviate from standard procedures if standard procedures do not provide a solution. Refers problems which do not respond to corrective procedures.

Computer Operator IV

Resolves a variety of nonstandard problems (e.g., frequent new programs, applications, and procedures). Problems may require unusual equipment connections and channel configurations. May also provide technical assistance to lower level operators and use knowledge of program languages, computer features, and software systems in assisting programmers, systems analysts, and other users in resolving problems. Completed work is usually submitted to users without supervisory review.

PERIPHERAL EQUIPMENT OPERATOR

(4613: Peripheral equipment operator)

Operates peripheral equipment which directly supports digital computer operations. Such equipment is uniquely and specifically designed for computer applications, but need not be physically or electronically connected to a computer. Printers, plotters, card read/punches, tape readers, tape units or drives, disk units or drives, and data display units are examples of such equipment.

The following duties characterize the work of a peripheral equipment operator:

a. Loading printers and plotters with correct paper; adjusting controls for forms, thickness, tension, printing density, and location; and unloading hard copy;
b. Labeling tape reels, disks, or card decks;
c. Checking labels and mounting and dismounting designated tape reels or disks on specified units or drives;
d. Setting controls which regulate operation of the equipment;
e. Observing panel lights for warnings and error indications and taking appropriate action;
f. Examining tapes, cards, or other material for creases, tears, or other defects which could cause processing problems.

This classification excludes workers (1) who monitor and operate a control console (see Computer operator) or a remote terminal, or (2) whose duties are limited to operating decollaters, bursters, separators, or similar equipment.

COMPUTER DATA LIBRARIAN

(4696: File clerk)

(4754: Stock and inventory clerk)

Maintains library of media (tapes, disks, cards, cassettes) used for automatic data processing applications. The following or similar duties characterize the work of a computer data librarian: Classifying, cataloging, and storing media in accordance with a standardized system; upon proper requests, releasing media for processing; maintaining records of releases and returns; inspecting returned media for damage or excessive wear to determine whether or not they need replacing. May perform minor repairs to damaged tapes.

DRAFTER

(372: Drafting occupation)

Performs drafting work requiring knowledge and skill in drafting methods, procedures, and techniques. Prepares drawings of structures, mechanical and electrical equipment, piping and duct systems and other similar equipment, systems, and assemblies. Uses recognized systems of symbols, legends, shadings, and lines having specific meanings in drawings. Drawings are used to communicate engineering ideas, designs, and information in support of engineering functions.

The following are excluded when they constitute the primary purpose of the job:

a. Design work requiring the technical knowledge, skill, and ability to conceive or originate designs;
b. Illustrating work requiring artistic ability;
c. Work involving the preparation of charts, diagrams, room arrangements, floor plans, etc.;
d. Cartographic work involving the preparation of maps or plats and related materials, and drawings of geological structures; and
e. Supervisory work involving the management of a drafting program or the supervision of drafters.

Positions are classified into levels on the basis of the following definitions:

Drafter I

Working under close supervision, traces or copies finished drawings, making clearly indicated revisions. Uses appropriate templates to draw curved lines. Assignments are designed to develop increasing skill in various drafting techniques. Work is spot-checked during progress and reviewed upon completion.

NOTE: Exclude drafters performing elementary tasks while receiving training in the most basic drafting methods.

Drafter II

Prepares drawings of simple, easily visualized parts of equipment from sketches or marked-up prints. Selects appropriate templates and other equipment needed to complete assignments. Drawings fit familiar patterns and present few technical problems. Supervisor provides detailed instructions on new assignments, gives guidance when questions arise, and reviews completed work for accuracy.

Drafter III

Prepares various drawings of parts and assemblies, including sectional profiles, irregular or reverse curves, hidden lines, and small or intricate details. Work requires use of most of the conventional drafting techniques and a working knowledge of the terms and procedures of the industry. Familiar or recurring work is assigned in general terms; unfamiliar assignments include information on methods, procedures, sources of information, and precedents to be followed. Simple revisions to existing drawings may be assigned with a verbal explanation of the desired results; more complex revisions are produced from sketches which clearly depict the desired product.

Drafter IV

Prepares complete sets of complex drawings which include multiple views, detail drawings, and assembly drawings. Drawings include complex design features that require considerable drafting skill to visualize and portray. Assignments regularly require the use of mathematical formulas to compute weights, load capacities, dimensions, quantities of materials, etc. Working from sketches and verbal information supplied by an engineer or designer, determines the most appropriate views, detail drawings, and supplementary information needed to complete assignments. Selects required information from precedents, manufacturers' catalogs, and technical guides. Independently resolves most of the problems encountered. Supervisor or designer may suggest methods of approach or provide advice on unusually difficult problems.

NOTE: Exclude drafters performing work of similar difficulty to that described at this level but who provide support for a variety of organizations which have widely differing functions or requirements.

Drafter V

Works closely with design originators, preparing drawings of unusual, complex or original designs which require a high degree of precision. Performs unusually difficult assignments requiring considerable initiative, resourcefulness, and drafting expertise. Assures that anticipated problems in manufacture, assembly, installation, and operation are resolved by the drawings produced. Exercises independent judgment in selecting and interpreting data based on a knowledge of the design intent. Although working primarily as a drafter, may occasionally perform engineering design work in interpreting general designs prepared by others or in completing missing design details. May provide advice and guidance to lower level drafters or serve as coordinator and planner for large and complex drafting projects.

ELECTRONICS TECHNICIAN

(3711: Electrical and electronic engineering technologist and technician)
(615: Electrical and electronic equipment repairer)

Works on various types of electronic equipment and related devices by performing one or a combination of the following: Installing, maintaining, repairing, overhauling, troubleshooting, modifying, constructing, and testing. Work requires practical application of technical knowledge of electronics principles, ability to determine malfunctions, and skill to put equipment in required operating condition.

The equipment—consisting of either many different kinds of circuits or multiple repetition of the same kind of circuit—includes, but is not limited to, the following: (a) Electronic transmitting and receiving equipment (e.g., radar, radio, television, telephone, sonar, navigational aids), (b) digital and analog computers, and (c) industrial and medical measuring and controlling equipment.

This classification excludes repairers of such standard electronic equipment as common office machines and household radio and television sets; production assemblers and testers; workers whose primary duty is servicing electronic test instruments; technicians who have administrative or supervisory responsibility; and drafters, designers, and professional engineers.

Positions are classified into levels on the basis of the following definitions:

Electronics Technician I

Applies working technical knowledge to perform simple or routine tasks in working on electronic equipment, following detailed instructions which cover virtually all procedures. Work typically involves such tasks as: Assisting higher level technicians by performing such activities as replacing components, wiring circuits, and taking test readings; repairing simple electronic equipment; and using tools and common test instruments (e.g., multimeters, audio signal generators, tube testers, oscilloscopes). Is not required to be familiar with the interrelationships of circuits. This knowledge, however, may be acquired through assignments designed to increase competence (including classroom training) so that worker can advance to higher level technician.

Receives technical guidance, as required, from supervisor or higher level technician. Work is typically spot-checked, but is given detailed review when new or advanced assignments are involved.

Electronics Technician II

Applies comprehensive technical knowledge to solve complex problems (i.e., those that typically *can* be solved solely by properly interpreting manufacturers' manuals or similar documents) in working on electronic equipment. Work involves: A familiarity with the interrelationships of circuits; and judgment in determining work sequence and in selecting tools and testing instruments, usually less complex than those used by the level III technician.

Receives technical guidance, as required, from supervisor or higher level technician, and work is reviewed for specific compliance with accepted practices and work assignments. May provide technical guidance to lower level technicians.

Electronics Technician III

Applies advanced technical knowledge to solve unusually complex problems (i.e., those that typically *cannot* be solved solely by reference to manufacturers' manuals or similar documents) in working on electronic equipment. Examples of such problems include location and density of circuitry, electromagnetic radiation, isolating malfunctions, and frequent engineering changes. Work involves: A detailed understanding of the interrelationships of circuits; exercising independent judgment in performing such tasks as making circuit analyses, calculating wave forms, tracing relationships in signal flow; and regularly using complex test instruments (e.g., dual trace oscilloscopes, Q-meters, deviation meters, pulse generators).

Work may be reviewed by supervisor (frequently an engineer or designer) for general compliance with accepted practices. May provide technical guidance to lower level technicians.

REGISTERED INDUSTRIAL NURSE

(29: Registered nurse)

A registered nurse gives nursing service under general medical direction to ill or injured employees or other persons who become ill or suffer an accident on the premises of a factory or other establishment. Duties involve *a combination of the following*: Giving first aid to the ill or injured; attending to subsequent dressing of employees' injuries; keeping records of patients treated; preparing accident reports for compensation or other purposes; assisting in physical examinations and health evaluations of applicants and employees; and planning and carrying out programs involving health education, accident prevention, evaluation of plant environment, or other activities affecting the health, welfare, and safety of all personnel. Nursing supervisors or head nurses in establishments employing more than one nurse are excluded.

Maintenance, Toolroom, and Powerplant

MAINTENANCE CARPENTER

(6422: Carpenter)

Performs the carpentry duties necessary to construct and maintain in good repair building woodwork and equipment such as bins, cribs, counters, benches, partitions, doors, floors, stairs, casings, and trim made of wood in an establishment. Work involves *most of the following*: Planning and laying out of work from blueprints, drawings, models, or verbal instructions; using a variety of carpenter's handtools, portable power tools, and standard measuring instruments; making standard shop computations relating to dimensions of work; and selecting materials necessary for the work. In general, the work of the maintenance carpenter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE ELECTRICIAN

(615: Electrical and electronic equipment repairer)
(6432: Electrician)

Performs a variety of electrical trade functions such as the installation, maintenance, or repair of equipment for the generation, distribution, or utilization of electric energy in an establishment. Work involves *most of the following*: Installing or repairing any of a variety of electrical equipment such as generators, transformers, switchboards, controllers, circuit breakers, motors, heating units, conduit systems, or other transmission equipment; working from blueprints, drawings, layouts, or other specifications; locating and diagnosing trouble in the electrical system or equipment; working standard computations relating to load requirements of wiring or electrical equipment; and using a variety of electrician's handtools and measuring and testing instruments. In general, the work of the maintenance electrician requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE PAINTER

(6442: Painter, construction and maintenance)

Paints and redecorates walls, woodwork, and fixtures of an establishment. Work *involves the following*: Knowledge of surface peculiarities and types of paint required for different applications; preparing surface for painting by removing old finish or by placing putty or filler in nail holes and interstices; and applying paint with spray gun or brush. May mix colors, oils, white lead, and other paint ingredients to obtain proper color or consistency. In general, the work of the maintenance painter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE MACHINIST

(613: Industrial machinery repairer)

Produces replacement parts and new parts in making repairs of metal parts of mechanical equipment operated in an establishment. Work involves *most of the following*: Interpreting written instructions and specifications; planning and laying out of work; using a variety of machinist's handtools and precision measuring instruments; setting up and operating standard machine tools; shaping of metal parts to close tolerances; making standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining; knowledge of the working properties of the common metals; selecting standard materials, parts, and equipment required for this work; and fitting and assembling parts into mechanical equipment. In general, the machinist's work normally requires a rounded training in machine-shop practice usually acquired through a formal apprenticeship or equivalent training and experience.

MAINTENANCE MECHANIC (MACHINERY)

(613: Industrial machinery repairer)

Repairs machinery or mechanical equipment of an establishment. Work involves *most of the following*: Examining machines and mechanical equipment to diagnose source of trouble; dismantling or partly dismantling machines and performing repairs that mainly involve the use of handtools in scraping and fitting parts; replacing broken or defective parts with items obtained from stock; ordering the production of a replacement part by a machine shop or sending the machine to a machine shop for major repairs; preparing written specifications for major repairs or for the production of parts ordered from machine shops; reassembling machines; and making all necessary adjustments for operation. In general, the work of a machinery maintenance mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. Excluded from this classification are workers whose *primary duties* involve setting up or adjusting machines.

MAINTENANCE PIPEFITTER

(645: Plumber, pipefitter, and steamfitter)

Installs or repairs water, steam, gas, or other types of pipe and pipefittings in an establishment. Work involves *most of the following*: Laying out work and measuring to locate position of pipe from drawings or other written specifications; cutting various sizes of pipe to correct lengths with chisel and hammer or oxyacetylene torch or pipe-cutting machines; threading pipe with stocks and dies; bending pipe by hand-driven or power-driven machines; assembling pipe with couplings and fastening pipe to hangers; making standard shop computations relating to pressures, flow, and size of pipe

required; and making standard tests to determine whether finished pipes meet specifications. In general, the work of the maintenance pipefitter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. *Workers primarily engaged in installing and repairing building sanitation or heating systems are excluded.*

MILLWRIGHT

(6178: Millwright)

Installs new machines or heavy equipment, and dismantles and installs machines or heavy equipment when changes in the plant layout are required. Work involves *most of the following*: Planning and laying out work; interpreting blueprints or other specifications; using a variety of handtools and rigging; making standard shop computations relating to stresses, strength of materials, and centers of gravity; aligning and balancing equipment; selecting standard tools, equipment, and parts to be used; and installing and maintaining in good order power transmission equipment such as drives and speed reducers. In general, the millwright's work normally requires a rounded training and experience in the trade acquired through a formal apprenticeship or equivalent training and experience.

MOTOR VEHICLE MECHANIC

(611: Vehicle and mobile equipment mechanic and repairer)

Repairs, rebuilds, or overhauls major assemblies of internal combustion automobiles, buses, trucks, or tractors of an establishment. Work involves most of the following: Diagnosing the source of trouble and determining the extent of repairs required; replacing worn or broken parts such as piston rings, bearings, or other engine parts; grinding and adjusting valves; rebuilding carburetors; overhauling transmissions; and repairing fuel injection, lighting, and ignition systems. In general, the work of the motor vehicle mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

This classification does not include mechanics who repair customers' vehicles or who only perform minor repair and tuneup of motor vehicles. It does, however, include fully qualified journeymen mechanics even though most of their time may be spent on minor repairs and tuneups.

GENERAL MAINTENANCE WORKER

(6179: Mechanic and repairer, not elsewhere classified)

Performs general maintenance and repair of building structures and their mechanical, electrical, or sanitary systems. May also perform general maintenance and repair of the establishment's machinery. Work requires a basic practical knowledge of several maintenance trades in order to perform most of the following: Keeping in good repair building woodwork; replacing electrical switches, fixtures, and motors; occasional painting or touching up of structure or equipment; repairing or replacing plumbing fixtures; and replacing broken window panes.

Excluded are positions requiring a formal apprenticeship or equivalent training in one or more crafts. Also excluded are workers participating in such a program.

MAINTENANCE TRADES HELPER

(863: Helper; mechanic and repairer)
(864: Helper; construction trades)

Assists one or more workers in the skilled maintenance trades by performing specific or general duties of lesser skill, such as keeping a worker supplied with materials and tools; cleaning working area, machine, and equipment; assisting journeyman by holding materials or tools; and performing other unskilled tasks as directed by journeyman. The kind of work the helper is permitted to perform varies from trade to trade: In some trades the helper is confined to supplying, lifting, and holding materials and tools, and cleaning working areas; and in others he is permitted to perform specialized machine operations, or parts of a trade that are also performed by workers on a full-time basis.

MACHINE-TOOL OPERATOR (TOOLROOM)

(6813: Machinist)
(731-2: Metalworking and plasticworking machine setup operator)

Specializes in operating one or more than one type of machine tool (e.g., jig borer, grinding machine, engine lathe, milling machine) to machine metal for use in making or maintaining jigs, fixtures, cutting tools, gauges, or metal dies or molds used in shaping or forming metal or nonmetallic material (e.g., plastic, plaster, rubber, glass). *Work typically involves*: Planning and performing difficult machining operations which require complicated setups or a high degree of accuracy; setting up machine tool or tools (e.g., install cutting tools and adjust guides, stops, working tables, and other controls to handle the size of stock to be machined; determine proper feeds, speeds, tooling, and operation sequence or select those prescribed in drawings, blueprints, or layouts); using a variety of precision measuring instruments; making necessary adjustments during machining operation to achieve requisite dimensions to very close tolerances. May be required to select proper coolants and cutting and lubricating oils, to recognize when tools need dressing, and to dress tools. In general, the work of a machine-tool operator (toolroom) at the skill level called for in this classification requires extensive knowledge of machine-shop and toolroom practice usually acquired through considerable on-the-job training and experience.

For cross-industry wage study purposes, this classification does *not* include machine-tool operators (toolroom) employed in tool and die jobbing shops.

TOOL AND DIE MAKER

(6811: Tool and die maker)

Constructs and repairs jigs, fixtures, cutting tools, gauges, or metal dies or molds used in shaping or forming metal or nonmetallic material (e.g., plastic, plaster, rubber, glass). *Work typically involves*: Planning and laying out work according to models, blueprints, drawings, or other written or oral specifications; understanding the working properties of common metals and alloys; selecting appropriate materials, tools, and processes required to complete task; making necessary shop computations; setting up and operating various machine tools and related equipment; using various tool and die maker's handtools and precision measuring instruments; working to very close tolerances; heat-treating metal parts and finished tools and dies to achieve required qualities; fitting and assembling parts to prescribed tolerances and allowances. In general, the tool and die maker's work requires rounded training in machine-shop and toolroom practice usually acquired through formal apprenticeship or equivalent training and experience.

For cross-industry wage study purposes, this classification does *not* include tool and die makers who (1) are employed in tool and die jobbing shops or (2) produce forging dies (die sinkers).

STATIONARY ENGINEER

(6931: Stationary engineer)

Operates and maintains one or more systems which provide an establishment with such services as heat, air-conditioning (cool, humidify, dehumidify, filter, and circulate air), refrigeration, steam or high-temperature water, or electricity. Duties involve: Observing and interpreting readings on gauges, meters, and charts which register various aspects of the system's operation; adjusting controls to insure safe and efficient operation of the system and to meet demands for the service provided; recording in logs various aspects of the system's operation; keeping the engines, machinery, and equipment of the system in good working order. May direct and coordinate activities of other workers (not stationary engineers) in performing tasks directly related to operating and maintaining the system or systems.

The classification excludes head or chief engineers in establishments employing more than one engineer; workers required to be skilled in the repair of electronic control equipment; workers in establishments producing electricity, steam, or heated or cooled air primarily for sale; and boiler tenders.

Material Movement and Custodial

TRUCKDRIVER

(821: Motor vehicle operator)

Drives a truck within a city or industrial area to transport materials, merchandise, equipment, or workers between various types of establishments such as: Manufacturing plants, freight depots, warehouses, wholesale and retail establishments, or between retail establishments and customers' houses or places of business. May also load or unload truck with or without helpers, make minor mechanical repairs, and keep truck in good working order. *Salesroute and over-the-road drivers are excluded.*

For wage study purposes, truckdrivers are classified by type and rated capacity of truck, as follows:

Truckdriver, light truck
(straight truck, under 1 1/2 tons, usually 4 wheels)
Truckdriver, medium truck
(straight truck, 1 1/2 to 4 tons inclusive, usually 6 wheels)
Truckdriver, heavy truck
(straight truck, over 4 tons, usually 10 wheels)
Truckdriver, tractor-trailer

SHIPPER AND RECEIVER

(4753: Traffic, shipping and receiving clerk)

Performs *clerical and physical* tasks in connection with shipping goods of the establishment in which employed and receiving incoming shipments. In performing day-to-day, routine tasks, follows established guidelines. In handling unusual nonroutine problems, receives specific guidance from supervisor or other officials. May direct and coordinate the activities of other workers engaged in handling goods to be shipped or being received.

Shippers typically are responsible for most of the following: Verifying that orders are accurately filled by comparing items and quantities of goods gathered for shipment against documents; insuring that shipments are properly packaged, identified with shipping information, and loaded into transporting vehicles; preparing and keeping records of goods shipped, e.g., manifests, bills of lading.

Receivers typically are responsible for most of the following: Verifying the correctness of incoming shipments by comparing items and quantities unloaded against bills of lading, invoices, manifests, storage receipts, or other records; checking for damaged goods; insuring that goods are appropriately identified for routing to departments within the establishment; preparing and keeping records of goods received.

For wage study purposes, workers are classified as follows:

Shipper
Receiver
Shipper and receiver

WAREHOUSEMAN

(4754: Stock and inventory clerk)

As directed, performs a *variety* of *warehousing* duties which require an *understanding of the establishment's storage plan*. Work involves *most of the following*: Verifying materials (or merchandise) against receiving documents, noting and reporting discrepancies and obvious damages; routing materials to prescribed storage locations; storing, stacking, or palletizing materials in accordance with prescribed storage methods; rearranging and taking inventory of stored materials; examining stored materials and reporting deterioration and damage; removing material from storage and preparing it for shipment. May operate hand or power trucks in performing warehousing duties.

Exclude workers whose *primary* duties involve shipping and receiving work (see Shipper and receiver and Shipping packer), order filling (see Order filler), or operating power trucks (see Power-truck operator).

ORDER FILLER

(4754: Stock and inventory clerk)

Fills shipping or transfer orders for finished goods from stored merchandise in accordance with specifications on sales slips, customers' orders, or other instructions. May, in addition to filling orders and indicating items filled or omitted, keep records of outgoing orders, requisition additional stock or report short supplies to supervisor, and perform other related duties.

SHIPPING PACKER

(8761: Hand packer and packager)

Prepares finished products for shipment or storage by placing them in shipping containers, the specific operations performed being dependent upon the type, size, and number of units to be packed, the type of container employed, and method of shipment. Work requires the placing of items in shipping containers and *may involve one or more of the following*: Knowledge of various items of stock in order to verify content; selection of appropriate type and size of container; inserting enclosures in container; using excelsior or other material to prevent breakage or damage; closing and sealing container; and applying labels or entering identifying data on container. *Packers who also make wooden boxes or crates are excluded.*

MATERIAL HANDLING LABORER

(8726: Freight, stock, and material mover, not elsewhere classified)

Performs physical tasks to transport or store materials or merchandise. Duties involve *one or more of the following:* Manually loading or unloading freight cars, trucks, or other transporting devices; unpacking, shelving, or placing items in proper storage locations; or transporting goods by handtruck, cart, or wheelbarrow.

Excluded from this definition are workers whose primary function involves:

a. Participating directly in the production of goods (e.g., moving items from one production station to another or placing them on or removing them from the production process);
b. Stocking merchandise for sale;
c. Counting or routing merchandise;
d. Operating a crane or heavy-duty motorized vehicle such as forklift or truck;
e. Loading and unloading ships (longshore workers); or
f. Traveling on trucks beyond the establishment's physical location to load or unload merchandise.

POWER-TRUCK OPERATOR

(8318: Industrial truck and tractor equipment operator)

Operates a manually controlled gasoline- or electric-powered truck or tractor to transport goods and materials of all kinds about a warehouse, manufacturing plant, or other establishment.

For wage study purposes, workers are classified by type of powertruck, as follows:

Forklift operator

Power-truck operator (other than forklift)

GUARD

(5144: Guard and police, except public service)

Protects property from theft or damage, or persons from hazards or interference. Duties involve serving at a fixed post, making rounds on foot or by motor vehicle, or escorting persons or property. May be deputized to make arrests. May also help visitors and customers by answering questions and giving directions.

Guards employed by establishments which provide protective services on a contract basis are included in this occupation.

For wage study purposes, guards are classified as follows:

Guard I

Carries out instructions primarily oriented toward insuring that emergencies and security violations are readily discovered and reported to appropriate authority. Intervenes directly only in situations which require minimal action to safeguard property or persons. Duties require minimal training. Commonly, the guard is not required to demonstrate physical fitness. May be armed, but generally is not required to demonstrate proficiency in the use of firearms or special weapons.

Guard II

Enforces regulations designed to prevent breaches of security. Exercises judgment and uses discretion in dealing with emergencies and security violations encountered. Determines whether first response should be to intervene directly (asking for assistance when deemed necessary and time allows), to keep situation under surveillance, or to report situation so that it can be handled by appropriate authority. Duties require specialized training in methods and techniques of protecting security areas. Commonly, the guard is required to demonstrate continuing physical fitness and proficiency with firearms or other special weapons.

JANITOR, PORTER, OR CLEANER

(5244: Janitor and cleaner)

Cleans and keeps in an orderly condition factory working areas and washrooms, or premises of an office, apartment house, or commercial or other establishment. Duties involve *a combination of the following*: Sweeping, mopping or scrubbing, and polishing floors; removing chips, trash, and other refuse; dusting equipment, furniture, or fixtures; polishing metal fixtures or trimmings; providing supplies and minor maintenance services; and cleaning lavatories, showers, and restrooms. *Workers who specialize in window washing are excluded.*

Area Wage Survey Summaries

The following areas are surveyed periodically under contract to the Employment Standards Administration of the U.S. Department of Labor for its use in administering the Service Contract Act of 1965. Reports on the surveys shown below are available at no cost from any of the Bureau's regional offices while supplies last.

Alaska (statewide)
Albany, GA
Albany-Schenectady-Troy, NY
Albuquerque, NM
Alexandria-Leesville, LA
Alpena-Standish-Tawas City, MI
Ann Arbor, MI
Asheville, NC
Atlantic City, NJ
Augusta, GA-SC[1]
Bakersfield, CA
Baton Rouge, LA
Battle Creek, MI
Beaumont-Port Arthur and Lake Charles, TX-LA
Biloxi-Gulfport and Pascagoula, MS
Binghamton, NY
Birmingham, AL
Bloomington-Vincennes, IN
Bremerton-Shelton, WA
Brunswick, GA
Cedar Rapids, IA
Chattanooga, TN-GA
Cheyenne, WY
Clarksville-Hopkinsville, TN-KY
Colorado Springs, CO
Columbia-Sumter, SC
Columbus, GA-AL
Columbus, MS
Connecticut (statewide)
Dayton-Springfield, OH
Daytona Beach, FL
Des Moines, IA
Dothan, AL
Duluth, MN-WI
El Paso-Las Cruces-Alamogordo, TX-NM
Eugene-Springfield-Medford-Roseburg-Klamath Falls-Grants Pass, OR
Fayetteville, NC
Fort Lauderdale-Hollywood-Pompano Beach and West Palm Beach-Boca Raton-Delray Beach, FL
Fort Smith, AR-OK
Fort Wayne, IN
Gadsden and Anniston, AL
Goldsboro, NC
Grand Island-Hastings, NE
Green Bay, WI
Greensboro-Winston-Salem-High Point, NC
Greenville-Spartanburg, SC
Harrisburg-Lebanon-Carlisle, PA
Jacksonville, FL
Jacksonville-New Bern, NC
Knoxville, TN
LaCrosse-Sparta, WI
Laredo, TX
Las Vegas-Tonopah, NV
Lexington-Fayette, KY
Lima, OH
Little Rock-North Little Rock, AR[1]
Logansport-Peru, IN
Lorain-Elyria, OH
Lower Eastern Shore, MD-VA-DE
Macon-Warner Robins, GA
Madison, WI
Maine (statewide)
Manhattan-Junction City, KS
Mansfield, OH
McAllen-Edinburg-Mission and Brownsville-Harlingen, TX
Melbourne-Titusville-Palm Bay, FL
Meridian, MS
Montana (statewide)
Montgomery, AL
Nashville, TN[1]
New Hampshire (statewide)
Norfolk-Virginia Beach-Newport News, VA
North Dakota (statewide)
Northern New York
Northwest Texas
Northwestern Florida
Oklahoma City, OK
Oxnard-Ventura, CA
Peoria, IL
Pine Bluff, AR
Portsmouth-Chillicothe-Gallipolis, OH
Poughkeepsie-Orange County-Kingston, NY
Providence, RI
Pueblo, CO
Puerto Rico
Raleigh-Durham, NC
Reno, NV
Saginaw-Bay City-Midland, MI[2]
Salina, KS
Salinas-Seaside-Monterey, CA
Sandusky, OH
Santa Barbara-Santa Maria-Lompoc, CA
Savannah, GA
Selma, AL
Sherman-Denison, TX
Southeastern Massachusetts
South Dakota (statewide)
Southwest Virginia
Spokane, WA
Springfield, IL
Stockton, CA
Tacoma, WA
Topeka, KS
Tucson-Douglas, AZ
Tulsa, OK
Upper Peninsula, MI
Vallejo-Fairfield-Napa, CA
Vermont (statewide)
Virgin Islands of the U.S.
Waco and Killeen-Temple, TX
Waterloo-Cedar Falls, IA
West Virginia (statewide)
Western Massachusetts
Wichita, KS
Wichita Falls-Lawton-Altus, TX-OK
Yakima-Richland-Kennewick-Pasco-Walla Walla-Pendleton, WA-OR

ALSO AVAILABLE—

An annual report on salaries for such jobs as accountants, auditors, public accountants, chief accountants, attorneys, programmers and systems analysts, job analysts, directors of personnel, buyers, chemists, engineers, engineering technicians, drafters, computer operators, and clerical employees is available. Order as BLS Bulletin 2317, *National Survey of Professional, Administrative, Technical, and Clerical Pay: Private Nonservice Industries, March 1988* (Price $5), from: Bureau of Labor Statistics, Publications Sales Center, P.O. Box 2145, Chicago, IL 60690, or Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

[1] In 1989, this area is scheduled to be surveyed under the Bureau's regular area wage survey program. See inside back cover.

[2] Scheduled to be surveyed in this program for the first time in 1989. In 1986, the area was surveyed under the Bureau's regular area wage survey program. See inside back cover.

Employee Benefits in State and Local Governments, 1987

U.S. Department of Labor
Bureau of Labor Statistics
Bulletin 2309

The Bureau of Labor Statistics issues its first bulletin on employee benefits in State and local goverments.

Data available

- Incidence and detailed characteristics of 14 employee benefits paid for at least in part by employer: Lunch and rest periods, holidays, vacations, and personal, funeral, jury-duty, military, and sick leave, sickness and accident, long-term disability, health, and life insurance, and retirement/capital accumulation plans. Retirement data include defined benefit plans and defined contribution plans, such as savings and thrift plans with salary reduction arrangements permitted under the Internal Revenue Code.
- Incidence and provisions of flexible benefits plans, reimbursement accounts, and unpaid maternity and paternity leave.
- Incidence data on 16 other benefits, including educational assistance, nonproduction bonuses, subsidized child care, and sabbatical leave.
- Data are presented separately for three occupational groups—teachers, police officers and firefighers, and regular employees.

Coverage

- Major benefits in State and local government establishments of the United States, except Alaska and Hawaii.
- Local governments with at least 50 employees, and the entire State government for States.

Source of data

- Sample of about 869 government units, including 24 States and 845 local government establishments; primarily by personal interview.

Uses

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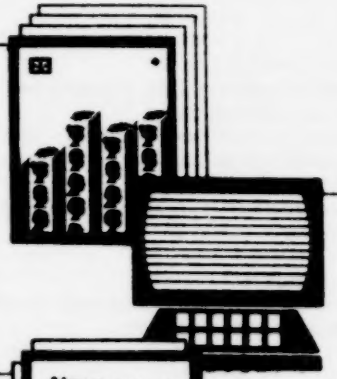

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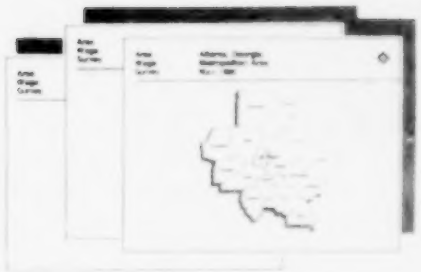

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